Childhood Education

THE MAGAZINE FOR TEACHERS OF YOUNG CHILDREN

FRANCES MAYFARTH, Editor

Published for the purpose of stimulating thinking rather than advocating fixed practice.

Volume XV Number 5

Next Month—

- Carson Ryan is preparing the editorial for the February issue which is to emphasize evaluation. Hilda Taba's article will explain what we mean by evaluation, will discuss what should be evaluated, and describe satisfactory ways of evaluating.

- J. Wayne Wrightstone's article will evaluate tests and measurements for young children; Ruth Streitz will evaluate units of work, and Robert Hill Lane will evaluate five replies to a questionnaire on reorganizing the primary school. The questionnaire will be included as a symposium.

- The second part of Frederick Pistor's article on activity schools in which he evaluates some current practices will complete the emphasis on evaluation.—*The Editor.*

Contents for January, 1939

Published Monthly, September to May, by the

ASSOCIATION FOR CHILDHOOD EDUCATION

With the Cooperation of the National Association for Nursery Education

1201 Sixteenth Street N.W., Washington, D.C.

Subscription price $2.50. A.C.E. membership and subscription $3.00. Foreign postage 50 cents. Single copies 30 cents. Entered as second class matter at the post office at Washington, D.C., under the act of March 3, 1879. Additional entry at Menasha, Wisconsin.

REPRINTS Orders for reprints from this issue must be received by the George Banta Publishing Company, Menasha, Wisconsin, by the 10th of the month of issue. Carefully indicate quantity, shipping instructions, etc.

The Environment Contributes
to Growth in Skills and Concepts

Planisphere made and used by pupils
of the Roosevelt School, Long Beach, California

Editorial Comment

Skills and Concepts in Perspective

EVEN THOSE most optimistic see human life today as a complicated puzzle with new inventions changing living and working conditions almost over night, with the home transferring many of its former responsibilities to the school and with a persistent removal of traditions that spelled security to the child of yesterday.

Understanding children and familiarity with their homes and neighborhoods are the vantage points from which a perspective on the relative values of school experiences may be taken. Each child is different from all other children. His skill and his understandings develop from his individual background of experience and through interests, abilities and attitudes that are peculiarly his own. He acts from different motives, learns in different ways and at different rates of speed from his associates. Each year finds him a different personality.

In analyzing the learning process, we have all been too much inclined to separate children's skills and understandings into unrelated compartments. In a child's growth and development a skill developed "here" is not unrelated to an idea developed "there." Growth in skill results in growth in self-assurance which in turn frees the child's mind for new experiences. Recognition of such interrelationships helps to acquaint children with the nature and use of objects, customs and processes, and thus to understand and take a successful part in life at home and in the community.

CONTRIBUTORS to this issue of *Childhood Education* have accepted the difficult task of showing relationships between skills and concepts in the school's program. They recognize differences among children and wide variations in home influences. They also recognize that teachers and parents need a wide range of experiences and appreciations as a background for helping children learn. Each incident in everyday life can contribute to children's understanding of form, time, space, and word meanings and to the various skills that are needed for attacking physical, social and intellectual problems. Guidance is needed to make the most of these experiences. The end result is found in the man who values understanding as "the well-spring of life" and who has acquired the skills to attain it.—*Mary Dabney Davis*

Units or Diaries?

FREQUENTLY, administrators urge us to prepare for publication descriptions of successful units of work or projects carried on in our classrooms. Shall we take the time and energy necessary to write these descriptions? Will not such records be used as props and patterns by weaker teachers? Will they be of any real help to stronger teachers? Some of us are inclined to doubt that they will.

The term, re-think, has been used in referring to our present-day education. Probably no better word exists, for progressive education is a way of re-thinking the curriculum in terms of children's needs. We start with children where they are today and make use of what the school and the community have to offer in the way of educative experiences. Most of these experiences have to do with people, rather than with things.

In preparing descriptions of units of work, do we not usually think in terms of things rather than in terms of people and their relationships with each other? Do we not stress the importance of material needs rather than the importance of human needs? Material things aid today's program, but they are not the most important factors in it.

SINCE THE visible, writable portions of units of work as we know them today do not give us the evidences of child growth and development, would it not be better to discourage their publication and turn our attention to diary records (like that of Gladys Ludwig's in *Childhood Education,* November, 1937) which place the emphasis upon the child, his needs, and his experiences, analyzed in terms of their contribution to his personality, his acquisition of skills, and the broadening of his concepts? *—Leonore F. Wilson, kindergarten critic teacher, State Teachers College, La Crosse, Wisconsin.*

Language—A Barrier

LANGUAGE is the greatest key man has to social communication and growth; yet it often proves a barrier to understanding and becomes, instead, a key to isolation. Educators are particularly prone to employ unusual words, involved phrases, and to adopt professional expressions with indefinite meanings. An idea may be clear to the speaker or writer but the words used to express it may convey only confusion to the listener or reader.

It is an art to give a great thought in such simple words that anyone can understand it. The teaching profession has too few such language artists. Until the value of simplicity of expression is known and practiced by those who have a message to give, there will be many poor teachers and many uninformed lay people where the opposite types might prevail. *—D. E. W.*

Skills in the Modern School Program

GERTRUDE HILDRETH

What has become of the 3 R's in the modern school program? Miss Hildreth of Lincoln School, New York City, assures us that they still exist but in "new and more appropriate raiment," which she describes and interprets.

THE elementary school in America has been dominated until recently by a formalized school program confined largely to basic skill subjects. Traditionally, learning to spell, to read or compute has been considered an end in itself, indispensable to the child for supposed mental discipline values. Educators tacitly assumed that the "harder" the subject, the greater the disciplinary value.

The "perfection" fetish that teachers worshipped resulted in daily devotion through the long school day to each separate skill in its own narrow niche. To attain early perfection in learning was the major goal. The subjects—reading, writing, and arithmetic—each had its allotted time fixed irrevocably for daily drill and each had its appropriate textbook. Skills in a narrow sense consumed the child's whole day. The three R's usurped valuable time children need for living and growing and becoming better acquainted with their environment.

Uniform achievement goals and standards were imposed on children in the belief that all that successful learning required was maximum effort on the child's part. Traditional schooling failed to provide for individual needs shown by school children in a typical age or grade group.

Lesson learning was done for its own sake. The learning was not functional nor meaningful. The work was detached and fragmentary, instruction was artificial, the learning was divorced from life. It had no vital significance for the children, no meaningful associations were built up, the skills did not develop from real problems. So long as the child could pronounce words or give number combinations perfectly from memory in record time, he was supposed to have "learned" reading or arithmetic and to have become "educated."

As a result, reading and arithmetic failed to function and learning became burdened with crutches employed by the child or teacher in order to bolster up the partial learning that had taken place. The incentives to learning were false and artificial, instead of intrinsic within a genuine learning situation. This was inevitable because the learning had no meaning for the child and had to be linked artificially with some direct appeal.

Ordinarily the gap between kindergarten and first grade work was too great. Abstractions were introduced too suddenly—before children had become acclimated to the new school environment and before they were ready to deal with symbolical materials. Precision in dealing with abstractions was demanded too early.

Goals of accomplishment were universally too high. The goals reflected too often what teachers or curriculum makers thought the children could accomplish, not what evidence demonstrated they were able to achieve successfully over a given period of time. Too seldom was the curriculum made with reference to children's needs, aptitudes, and readiness. As a result, excessive homework was necessary to achieve the goals set up. Even after eight years' instruction, children were scarcely equipped to meet their ordinary daily requirements in reading varied materials, in

EDITOR'S NOTE: For a more detailed discussion of skills in the modern school program, see Miss Hildreth's recent book, *Learning the Three R's: A Modern Interpretation.* Philadelphia: Educational Publishers, 1936.

solving practical arithmetic problems, or in using written English effectively. The facts crammed in were only half digested and children were found to be suffering from educational malnutrition. "School failures," "disability cases" needing "remedial work" to "catch up" were the natural outcomes. Children not only failed to learn the assigned lessons but the lessons learned failed to function when the children were confronted with practical situations calling for genuine reading, arithmetic, and writing skills.

Worse still, children developed undesirable behavior and negative attitudes. They became unruly, recalcitrant, resistant, apathetic, fearful, rebellious, uncooperative, discouraged, incapacitated for further learning in the very institution designed to promote character development and personal adjustment.

What Has Happened to the 3 R's?

The idols have been cast down! Schools infused with new light have supplanted the old. Today, in the modern school program, the three R's are sometimes difficult to find. They have to a large extent become absorbed in units of work, activities, integrated programs, and experiential lessons. Children still learn to read, write, spell and compute—in most cases with more satisfactory results than in former days, with more lasting effects, and with less wear and tear on the child and teacher. During the learning process, the learning functions in the child's maturing activities.

New experiments in psychology and education have indicated the benefits to child growth and development derived from integrated, meaningful learning. These results from experimentation have been carried over into the experimental laboratory schools established in university centers where demonstrations of the good results to be obtained from the newer type curriculum have been observed and evaluated.

Instead of being taught in watertight compartments, the interrelations among varied experiences and learnings are capitalized. Spelling reaches into writing, composition, language, English expression, and word study. Reading is as broad as the content itself. Arithmetic is taught from the beginning as a social study. Finally, the parent in dismay asks, "Where are the 3 R's?" The basic skills are retained but appear in new raiment more appropriate than before.

Making the Skills Functional

The most important question propounded by educational psychologists in recent years is this: Can children learn skills efficiently, economically and permanently in such a way that results function in the practical test of use, and at the same time can they learn the skills *meaningfully?* Can the child use his skill while learning? For example, can the child in learning to read, from the very outset, read meaningfully in the very way reading is actually to function later? In learning to write, can the child even in beginning lessons write for a real purpose and accomplish some genuine writing task? (Making pushes and pulls and continuous overlapping circles in writing practice is good for improved muscular coordination of arm and fingers, yet is not writing in any functional sense.)

The answer to the question is overwhelmingly *yes,* to judge from results of many recent experiments in educational psychology and the testimony of expert teachers. The only profitable way in which to teach the child skills in initial stages is within meaningful, functional instructional units.

This shift in emphasis and method will not alone solve all our problems, but it will enable many children to succeed who formerly failed. The general rule then is: practice the skills from the outset in the way they are eventually to function. If this principle is followed, there is less need for concern over dubious "spread of training" or "transfer values." Later the child will not have to re-learn reading or arithmetic techniques to

insure operation in actual reading and problem solving.

This trend results in simplification since much content and equipment which the techniques formerly required when skills were more formalized now prove to be obsolete paraphernalia.

At the same time that skills have been simplified instructionally, the total concept has broadened. The skills are no longer restricted to the three R's but include in addition to them the language arts—spoken and written English; health habits and practices; skills in sports and games; household arts and manual arts techniques, as well as certain skills employed in dealing with science material in the lower grades.

Considering Maturation and Experience

Children acquire skill in walking and talking, both through maturation of the nervous system as well as through environmental stimuli. In early learning stages maturation plays the dominant rôle. Intensive training helps very little. The sequential stages through which all normal children pass in acquiring these skills have been identified.

So, too, in acquiring the skills appropriate to the school age child, the time comes in the child's maturation progress when he seems more ready than formerly to acquire skills such as reading, writing, and working with numbers. There is an appropriate time for systematic instruction that is most economical for the child, but this period is not identical for all children of the same age. Even the most skillful and intensive instruction is ineffectual until the mind is sufficiently mature to respond. Learning can only be artificial, piecemeal and formal when we force the learning process, for it is impossible under these circumstances to capitalize meanings.

In the modern elementary school program the transition from kindergarten to first grade is more gradual than formerly. There is no sudden plunge into abstractions. More account is taken of the knowledge and skill children bring with them, and subsequent lessons are based upon these learnings. Readiness for learning is assured—readiness in terms of physical, mental, social, and emotional maturity—before any formal lessons are introduced. Modern teachers realize that the child needs a period of personal adjustment in first grade, and that language development must precede learning to read.

In modern schools the trend is toward delaying reading instruction a half-year or more in first grade. Writing and spelling tend to be delayed about a year, and formal arithmetic computation about two years. This does not mean, however, that informal teaching and learning are not taking place constantly. During the preparatory period experiences are provided that are basic to the facts and skills to be acquired. Instruction in the skills begins with meaningful elements and concepts, not with artificialities that are difficult for children to comprehend and retain. Learning to read is tied up with the experiences the children are having in their daily work and play. Spelling and writing are functional from the outset. Instead of plunging at once into arithmetic computation, children talk about number relationships. They gain informal experiences with number problems in real situations.

Too often the notion prevails that all the child learns the teacher has taught him, whereas experiments with children indicate that they readily acquire knowledge and skill through informal outside influences and through their own independent efforts to learn. In the traditional program the teacher takes most of the responsibility for organizing and planning lessons; children have little opportunity to direct or control their own learning efforts. The modern school, on the contrary, provides a program that stimulates incidental learning through experiences that help children acquire skills as a result of their questions and largely through their own initiative.

Modern curriculum makers realize that learning can now be distributed over a longer time span because children now remain in school for a longer period than formerly. It is, therefore, not so necessary as it was a century ago that all of the skills necessary for life purposes be acquired by the age of twelve or fourteen.

Individualizing Instruction

We have learned through costly experience that mass instruction, uniform teaching, and textbooks do not fit the typical classroom group. Consequently in the modern school the newer tendency is to differentiate instruction, goals, standards, techniques and materials in harmony with the determined abilities, aptitudes and requirements of the children. The range has been found to be wider in every grade than most teachers and parents suppose. School programs frankly recognize the need of the slow-learning and mentally retarded child and the handicapped individual who needs more time for practice and more repetition and closer contact with an individual teacher. Mentally subnormal children and those who are retarded or backward learners have differentiated work and are not expected to progress so rapidly as normal children. The dull child requires a completely revised program, dealing less with textbooks, more with practical experiences. Those with speech defects, the deafened, or those with other handicaps that interfere seriously with achievement are given training to remove the handicap and are placed in special classes for the handicapped.

Individualizing the program involves classification of pupils who can work together profitably, the formation of subgroups in large classes, individual assignments appropriate to the child's achievement level, maximum and minimum achievement standards, and instruction in skills placed on an individual, diagnostic basis.

Using New Methods and Materials

The newer program in skills is characterized by new methods, techniques, materials and equipment. Simplification has been effected, and the new techniques are more harmonious with natural growth in learning. In the place of a single basal, uniform textbook for instruction in skills, teachers now make use of a wide range and variety of instructional materials including books, charts, apparatus, cards and games, drawing and reproducing material, and equipment. The children, by the time they reach grade three, are rapidly reaching out beyond their immediate environment; they need many books to unlock the whole wide world for them. To confine reading experience to a single book would result in an unfortunate narrowing of their environment.

Textbook learning has been supplemented by other instructional materials—work sheets, card materials, picture files, movies, radio, demonstrations, experiments, school trips, shop and science equipment. The new materials are individualized, differentiated yet better integrated from level to level and broken down in small units. For example, in arithmetic, individualized work sheets supplement the more comprehensive textbook. These work sheets provide opportunity for differentiated practice on the items on which the child needs drill. Pretests over a brief arithmetic unit indicate the precise type of exercise each child needs, and end tests following practice show how rapidly he is ready to go forward.

In the transition the teacher has become a learning guidance expert, capable of anticipating difficulties before they arise, able to diagnose and to alleviate the child's difficulties as they arise. By stressing the practicable and rational, instead of the impossible, teachers share children's learning experiences with them. In modern schools the furniture and equipment have been modernized to allow for the wider range of child activities

which the new program requires. The classroom has expanded into the community.

Incidental Learning and Diagnostic Drill

It is fallacious to assume that incidental learning will provide all the practice a child needs to acquire skills. All evidence indicates that in learning any skill, direct, systematic practice with active recitation facilitates learning. This is true of learning the three R's just as it is true of learning to read music, to typewrite, or to play tennis. Consequently the skillful teacher sets aside some definite time in the school program for work on skills, and systematizes instruction so that repetition and regular practice are provided. The fact that some gifted children in laboratory schools seem to have little need for direct practice in a period designated for "arithmetic" does not mean that all children will learn equally well informally.

Children do not learn to read by being given some attractive books, and then being let alone with them. This method has been tried and found to fail. Direct teaching is recognized as necessary for maximum achievement in acquiring true performance in any skill. The newer trend is to give systematic daily drill on facts that need to be memorized, reinforcing memory work with meaning at every point so that the actual time spent in drill can be reduced to a minimum. In the modern school, drill is organized on a diagnostic basis. Definite practice is given a child at the time and in the way he needs it. No hard and fast rule can be given in answer to the question, "How many minutes a day and how often during the week should we have lessons in the different skills?" The time must vary with the maturity the children show and the particular program undertaken. To make general pronouncements would violate the principle of providing for individual needs.

Some teachers, anxious to be progressive, tend to "drag in" some activities to teach skills. This tendency can become just as formal as the traditional skills program and may be equally artificial. The activities do not in themselves teach the skills, but rather give meaning to them and stimulate practice in them because of a recognized need to acquire better techniques.

Achievement is evaluated in terms of the child's capacity to achieve and his success in using the skill, rather than in terms of narrow goals—"ability to add columns of ten two-digit numbers in so many minutes," or "able to read 170 words a minute"—useful as these standards may be for reference points.

When the school introduces and trains each child of society into membership within a little community, saturating him with the spirit of service, and providing him with the instruments of self-direction, we shall have the deepest and best guarantee of a larger society which is worthy and harmonious.—*John Dewey.*

The Environment—A Contributing Factor to Growth in Concepts and Skills

ELGA M. SHEARER

LESS and less becomes the reliance of educators upon verbal explanations, ready-made comparisons, and dull repetition in helping the child to gain concepts and skills. Fewer still are the efforts made to pass on conclusions to the exclusion of the child's own reasoning and generalizations. Whether in spoken or in printed form these attempts to "educate" have failed. The purpose of this article is to reveal some of the newer trends in shaping the child's environment to the end that he may grow in ability to think and to do.

No longer do the four walls of the twenty-three by thirty-six foot classroom encompass the child's school environment. Neither do the limits of the playground, embracing as they do the so called "entire school plant," constitute his learning field. The limits of the modern school are indeed undefinable for they extend as far as do cordial welcome to inquiring childhood and safe transportation facilities.

TO GROWTH IN CONCEPTS

Through Excursions: In Long Beach, sea life is studied on the sandy beach where the sea snail lays her eggs, among the rocks where the starfish is found in his native habitat, and in the tide pool where the intriguing hermit crab never fails to awaken new interest and provide opportunity for new observations. Here true concepts are found because the children are face to face with manifold realities.

Whence comes the bread which is a universal item in the child's menu? Rarely does home life yield the answer beyond the point at which the grocer delivers the loaf sliced ready for serving. The text or reference book attempts to insure the necessary concepts by telling about the various processes involved. Modern schools, however, do not trust this alone. The children are taken to the bakery to see various kinds of bread being made. Only thereafter can they interpret with understanding such textbook phrases as: mixing the dough, yeast making the dough swell and puff out; dough ready to be baked; shaping the loaves; the ingredients of the bread. Only in such an environment can the child develop generalizations to be used as the basis for clear reasoning about this social service.

This article reveals "some of the newer trends in shaping the child's environment to the end that he may grow in ability to think and to do." Miss Shearer is supervisor of elementary education in grades four, five, and six, Long Beach, California.

Unfortunately the possibilities for direct contacts with the activities of the outside world are limited. The restrictions which inhibit more frequent trips are too well known to require enumeration. Happily these are being rapidly removed with the result that each year marks an increase in the utilization of class excursions. However, if a distortion of the well-known quotation from Bacon is permissible, it may be said that the day has come when Mahomet unable to go to the hill can call the hill to him.

Through Audio-Visual Departments: The audio-visual departments, so rapidly establishing their place in school systems, offer

means second only to the excursion for building accurate concepts. Lest the term "audio-visual" may connote to some readers only moving picture films and slides, let the writer hasten to say that valuable as these are they constitute only one type of offering available in a truly functioning audio-visual department. Though it is only within the last three years that the audio-visual service in Long Beach has been delegated to a department in itself and a small staff of workers released to concentrate upon the assembling and distributing of appropriate materials, already in addition to a rich offering of films and slides, it has made available an ever-expanding collection of nature materials such as shells, minerals, mounted birds, mounted insects, well-stocked aquaria and other live specimens; art textiles; pottery; historical and peasant costumes; industrial exhibits; household articles peculiar to homes in other times and those in other lands; mounted pictures of both informational and appreciational values; and working models of simple machines.

Through Museums and Laboratories: In many elementary schools the awareness of the principal and teachers to the value of true concepts as a basis for thinking and understanding has resulted in the development of museums and laboratories within the buildings. No longer does the child have to wait until he reaches the secondary school to enjoy the opportunities thus afforded. The generosity of parents who appreciate these conditions for vital learning has made possible growing collections of materials suited to the demands of the children. In one community last year the parent-teacher association set aside a liberal fund to be used by the elementary school librarian while traveling abroad that she might bring back materials to aid in giving their children truer concepts of their neighbors across the sea.

Especially valued have been the possibilities provided for experimentation and other direct experiences in the field of science. Indications keep alive the hope that some day every elementary school will have a laboratory equipped for the proper care and fullest use of science materials—an inviting room with an ever open door for children who will come individually to satisfy curiosities and feed interests that take form in that atmosphere, as well as for groups who under the guidance of their teachers formulate purposes before coming to the laboratory. Such laboratories are already having their birth in the classrooms, are spilling out, as it were, into the corridors, unused cloakrooms, and like channels.

Yet these spaces are inadequate and the ever-growing interest on the part of both children and teachers presages an open-door and open-case laboratory in every elementary school. There the children will find the proper facilities for keeping the larvae they collect and observing the various steps in their development. There the children will organize concrete evidences of damage done by certain insects and perhaps bring into "humane imprisonment" for study the insects that stand accused. There the child will find a place secure against dust to display for the enjoyment and inspiration of others, the leaves and flowers they have gathered and pressed. There in a salt water aquarium will be the sea anemone which the children have brought from the tide pool that they might study its habits over a period of several days and reach conclusions regarding this fascinating little creature. There will be the harmless dyes with which the children may experiment, in accordance with self-direction, and the simple dry cells or searchlight batteries so cherished by the pupils with a budding interest in electricity. The foregoing is not intended to be all-inclusive. It is merely a hint as to the vision of what lies in the immediate future.

Through Experiences in Handcrafts: Thus far the writer has purposely refrained from mentioning that group of children's enterprises so commonly associated with the activity program. Few if any schools today lay

claim to a new type program unless some provision is made for purposeful handcraft experiences. Whether this be a matter of providing opportunity for Mary to make a dress for her doll or that of guiding a group of ambitious youngsters in constructing an adobe dwelling of such proportions that through dramatic play they may identify themselves with certain early settlers in California, experience with pliable materials of many kinds is a recognized need of childhood. From these experiences the difficulties that are encountered; the ideas that are tried, rejected or accepted; the temporary failures, and the ultimate successes emerge concepts that insure clearer thinking and a higher degree of reasoning ability.

Through Dramatic Activities: Since many of the handcraft enterprises of children are closely related to their dramatic play or their dramatization, it is fitting at this point to direct attention to these dramatic activities as potential contributors to concept formation. It is extremely doubtful if a child can identify himself with another character, adopt his feelings and emotions and through imagination project himself into other times and other places without acquiring definite concepts relative to the situations portrayed.

More important than this is the opportunity provided through this participation in make-believe for the children to work and act together in a common, vital undertaking. In this environment grow concepts of human relationships. Doubtless these concepts will be modified by subsequent experiences both in and out of school. Nevertheless, herein lies the opportunity for promoting a situation from which some of the finer concepts may emerge—human sharing, friendly consideration, sincere appreciation of successes, tolerance with unavoidable failure, and the like. Never can these concepts grow in a regime of individual tasks set out by the teacher, accepted unwillingly by the pupils, and performed independently

Edison School, Long Beach, California

Studying sea life in its native habitat.

Willard School, Long Beach, California

Acquiring skills in the satisfaction of genuine purposes.

by them. The concepts of life in a democracy with which children at adulthood enter upon their responsibilities as voting citizens will be the result, in part at least, of their experiences as members of juvenile groups. Hence, if for no other reason, it is desirable that these concepts be of the highest possible type.

To Growth in Skills

Up to this point, the writer has said nothing about the contribution of the environment to the child's growth in skills. It is hoped, however, that the implication has not been lacking.

The skills which the child needs to satisfy his purposes are numerous and various, so much so that any attempted enumeration results in a list far from complete. He needs to read, to write, to speak clearly and effectively, to sing, to spell, to compute numbers, to use his hands in shaping to his use the many available manipulative materials, and so on ad infinitum.

The modern educator does not believe that these can be mastered adequately in an environment devoid of situations which make the child recognize these skills as necessary to the accomplishment of his purposes. If what he needs to know is hidden in the pages of a book and the lack of it is thwarting him in carrying out his purposes, the condition is most favorable for his growth in the reading skill. If he recognizes the necessity for keeping a record of his plans or of communicating with some one at a distant point, the chances for his accepting guidance in learning to write are extremely favorable. If he is constructing a kite that he may join his companions in the sport of kite day, he is ready to master the skills involved.

The foregoing examples need not be multiplied to illustrate the fact that the environment in which children are actively engaged in pursuing purposes genuine to them is the environment most conducive to growth in the various skills.

In recognition of this principle, radical changes are being effected in the ways in which children are guided through the mastery of the desirable skills. Perhaps the last of these to yield to a new type of guidance has been the skills involved in arithmetic. As educators we have been slow to recognize the occasions in the active life of the child which give rise to the need for these skills. Slower still have we been in appreciating the fact that growth in quantitative and qualitative concepts is an essential forerunner of growth in computational skill.

To enhance the significance of the foregoing statement it may be fitting to relate an experience recently enjoyed by one of our sixth grade classes[1] while on an excursion. It is cited to illustrate opportunities to which educators will have a growing awareness as soon as they cease to associate arithmetic exclusively with a textbook.

While on an excursion, one of the finest number experiences the children had was in connection with a cargo of fresh tomatoes that had just arrived from Mexico. The class was asked to stand at a distance sufficient to allow plenty room for men to operate the unloading crane. It was explained that it was costing $25 per hour to unload the tomatoes; furthermore, that money had already been lost due to the weather turning warmer while the cargo was enroute, with the result that many of the tomatoes had become so ripe that they would have to be sold for canning instead of for salad. This became significant when the children were told that salad tomatoes bring a much better price than canning tomatoes and that the entire shipment had been intended for the former. The children computed the cost ($25 ÷ 60) and found that if they caused a minute of delay it would cost the shipper $.416.

[1] Frances E. Willard School, Long Beach, California.

The class was interested in the work of the government inspector concerned with duties on foreign produce. Of equal interest were the activities of a government detective looking for contraband goods or narcotics often smuggled into the United States with small merchandise.

They saw the government inspector count every crate of tomatoes before they were loaded on waiting trucks. They saw every crate that showed traces of tomato juice set aside for canning. They watched the government inspector open the boxes and pick out a tomato to test it for concealed narcotics. They learned that it was impossible because of the cost to inspect every box. The government inspector said on the "law of averages" if anything were smuggled into our country, it was bound to be brought out in handling 7000 lugs of tomatoes. The children saw that out of every load brought up from the hold of the boat, sometimes a second, then a fifth then a third, and then a tenth box was opened and investigated. They learned that this method of detecting unlawful activities is quite reliable and that it is used almost exclusively in buying, selling, and shipping.

Upon inquiry the committee learned that the 7000 lugs shipped were stored in the hold of the boat, and that the government charged 3¢ a pound or 90¢ a lug for duty on the tomatoes, an amount which also covered the cost of inspection. They learned from the shipper that in order to meet expenses on the salad tomatoes the lug would have to retail at about $2.00. This would cover the cost of purchase, transportation on the boat for ten days, unloading from the boat, trucking to the wholesale house, and the cost of government duties.

The children took their figures back to school. Their harbor trip furnished a number of experiences extending over several weeks. They went to the markets and priced fresh tomatoes and were not surprised that fresh salad tomatoes were retailing at 18¢ a pound at that time.

In closing this article, the writer wishes to express directly what has been repeatedly implied in the foregoing paragraphs; namely, that if we desire to enhance the child's growth in concepts and skills, we may well look first to an enrichment and expansion of the environment in which he lives and to which he responds.

How Number Learning Develops

JOSEPHINE H. MACLATCHY

IN LEARNING, number seems unique: the first steps are best taken by the child alone with little guidance and no instruction. Fortunate is the child who early discovers number and thinks about it. Almost as fortunate is the child who although unfamiliar with number has a primary teacher who understands the long, arduous way of first learning in number and who provides him with opportunities for acquiring the essential number experiences for himself.

Perhaps when we know more of the basic skills in reading, we shall no longer designate number as unique—simply as unusual. At present, however, our knowledge of number learning extends back to beginnings in the early months of the second year of life. The facts are gathered from a few diary accounts of individual children and from the reports of several studies involving large numbers of young children.

"At the early stages of number learning it is difficult to distinguish between skill and concept, and perhaps this is always so," says Miss MacLatchy, research associate in the Bureau of Educational Research, Ohio State University. She quotes from diary records that describe the beginnings of number understanding, tells how number learning is developed, and how number interpretations become meaningful.

THE BEGINNINGS OF NUMBER UNDERSTANDING

The classic among the diary reports in psychological literature is the account which Dr. Decroly gives of the number ideas of his little daughter, Suzanne, from the fourteenth month to her fifth birthday. A few quotations will show the care with which the child's progress in number was recounted:

It is impossible to find during a child's first year manifestations capable of informing us concerning the ideas which he may possess regarding number and quantity. . . . The first observations which we made regarding Suzanne dated from the fourteenth month (13 months 7 days). She had just been weighed. When put back on the floor, she began to play with the weights of the scales. There were three. She struck them, one against the other, amusing herself with the noise they made, and pushed all three ahead of her (she was on her hands and knees). When one of the weights rolled away, she found it again and placed it with the others.

Here was evidently a visual idea of the group formed by the weights. When this group, this combination of which she had the representation, changed its aspect in regard to number, she noticed it, found the cause and remedied it.

After the fourteenth month, we noted frequent occasions which proved that the child first had the idea of number visually. . . .

. . . . . .

In her seventeenth month Suzanne saw two white rats in a large cage. She observed them with great interest. Her brother distracted her attention for a moment; when she again looked at the rats, one of them was hidden under the straw. She noticed its disappearance, looked at the rat which was crawling about on the wires of the cage, and then with little gestures of great curiosity, tried to find the other.

[About this time] Suzanne was playing with four cubes from a Froebel game. She placed them at random one on top of the other and one beside the other. Three cubes fell to the floor. Two were returned to her. The child was completely satisfied. She made no sign of asking for the fourth. She did not notice it was missing.

. . . . . .

We heard Suzanne use the names of the numbers one and two for the first time in the twenty-third month (22 months 14 days) . . . it was purely mechanical denomination of repetition without any idea of enumeration. She used it to mark rhythm in two periods. . . . The smallest pupils of the Institute were seated on a garden

bench. Standing before them, Suzanne counted, "one, two, one, two, one, two," and they balanced back and forth in rhythm.

. . . . . .

For some time previous to her twenty-seventh month she knew that she should have two gloves, two stockings, two shoes for herself or persons for whom she had fetched such commodities. During her twenty-seventh month she accomplished a rather complex activity with the number two, which resembled division and which was a further evolution of the two idea. Suzanne and Louis, a little seven-year-old pupil of the Institute of Special Instruction, were playing at throwing balls, each from his side. Louis' ball was hidden when he was not looking; he took possession of Suzanne's which likewise disappeared. She immediately went to the cellar near where they were playing, returned with two potatoes, gave one to Louis, and kept the other for herself. She then resumed her game. The significant feature of this act consisted in determining the total number of objects which she must take so that each person would have one.

. . . . . .

At the twenty-seventh month she manifested clearly that she had the visual idea of three, and her performance suggested subtraction. There were three small boxes filled with zinc letters which were used by the children in the class to which Suzanne belonged. One day when three pupils were using these boxes Suzanne, who was near by, noticed that two boys were using these boxes, and she wanted to do the same thing. She rose and went toward the place where the boxes were usually kept. "No boxes," she said, for she had not noticed the boy using the third box; she seemed to have done this reasoning, "I see two boxes; there are three. Therefore, I ought to find one in the usual place." In fact, she continued to hunt until she spied William using the third box. She darted to him, took the box from him, and said. "Mine."[1]

The stories of these few incidents will show the simple beginnings from which number understanding grows. They show recognizable steps in development, that in experience the first understanding follows the numerical series. Before she knew three, Suzanne could recognize two as a group, count them, and divide them. At seventeen months a group of more than two cubes was undefined for three satisfied her, although she had originally had four.

The Development of Number Learning

In three studies involving large groups of children from two to six years old, the facts of the slow development of early number learning are carried forward, and they are summarized by Stern. In Geneva, Switzerland, Mlle. Descoeudres tested more than three hundred children whose ages ranged from two and a half to six years. She found that the two-year-olds could say the number names from one to four; they could match a group of two pebbles; they could give the name, one, to a single object. The three-year-olds could match groups of three objects, could match two objects by fingers or two fingers by objects, could name groups of two objects, could take two objects from a larger group, could say the number series to six, and could imitate arrangements of two objects. The four-year-olds could say the number series to seven or eight, and raised all the other abilities of the three-year-olds one number. The four-year-olds also could count with enumeration to six, an ability not possessed by the younger groups. The five-year-olds matched and recognized groups of five objects and counted by rote and with enumeration to ten.[2]

Beckman, a German investigator, studied the familiarity with numbers one to five which was possessed by 465 children whose ages ranged from two to six years. All the testing was done with objects—small cubes, dice, marbles, and the like. Filbig, also a German, tested the number abilities of 102 children enrolled in kindergarten.

The findings of the three last investigators have been summarized by Stern to show the ages at which the numbers two, three, and

[1] M. le Docteur Decroly et Mlle. Julia Degand. "Observations Relatives: L'Evolution des Notions de Quantités Continues et Discontinues chez L'Enfant." *Archives de Psychologie*, XII (May, 1912) pp. 86-87, 91, 93, 94.

[2] Descoeudres, Alice. *Le Developpement de L'Enfant*. Paris: Delachaux and Niestle, S. A. (No date). Pp. 271-294.

four were mastered by the children concerned:

	Two	Three	Four
Beckman . . .	3:6 to 4:0[2]	4:0 to 4:6	5:0 to 5:6
Filbig	3:9	4:2	5:6
Descoeudres	3:0	4:0	5:0

Stern comments on these studies further: "Arithmetical development makes its greatest progress about the age of four, namely at the time when the child masters the distinction between one and two. As soon as the three idea is conquered, the way is apparently clear for the higher numbers."[4]

In his intensive analysis of the facts he gathered, Beckman differentiates six possible components of the consciousness of number:

Hearing a number (aural) as when the child quite mechanically tries to repeat his mother's "one, two" in connection with his early attempts at taking steps.

Speaking the number (oral) as when the child uses the number name at first without fully comprehending its meaning.

Reproducing the number—imitating a presented group of objects either with similar objects; fingers or counters.

Distinguishing the number—Is this 3 or 4?

Finding the number—Give me 3.

Naming the number, as when the child correctly names the number of objects in a presented group.[5]

The different parts in number development appear at different ages and reach their full growth at different times. His findings may be summarized somewhat as follows:

At 3 years 6 months the median child in the group could reproduce two, distinguish one, and find one.

At 4 years 6 months he could reproduce four, distinguish four, find three, and name two.

At 5 years 6 months he could reproduce, distinguish, and find four and name three.

At 6 years he could reproduce and distinguish five and still find and name four.[6]

Counting, saying the number names in serial order and designating the members of a group by enumeration, is an essential activity in early number learning. It is, indeed, an essential ability in elementary-school arithmetic. It frequently happens that children who count when they add are found to have an inadequate knowledge of the number series beyond 20 or 30.

Think how well the child needs to know the number series. He needs to know what precedes or follows a number, count backwards, count by two's, by five's, and be able to place a number in the series. Miss Drummond by an analogy convincingly has shown the task involved in the mastery of counting:

It needs very much practice to mechanize the number relations as perfectly as is necessary. We shall be able to sympathize with the children's difficulties if we consider our own knowledge of any other series of sounds, say the first four lines of "Jack and Jill." Let us ask a friend to test us in this fashion: What word comes before *down?* What word comes after *his?* Go through the verse saying only every second word. Say only every third word. Say the whole verse backward. After a few minutes of this sort of thing we shall have convinced ourselves that well as we know the verse, we cannot respond without using the devices employed by the children when dealing with the number series.[7]

Fortunately, children enjoy repeating a series of sounds and through imitating the use of them on appropriate occasions eventually learn their meaning. Stern tells that his daughter at seventeen months counted objects by a series of her own which sounded like this: *dei, sei, dei, dei.* Miss Drummond's niece, Patricia, who often sat in the room when her aunt was measuring out spoonfuls of coffee which she usually counted aloud, accompanied her aunt's movements one morning, when the measuring was done with-

[2] The measure 3:6 means 3 years 6 months.

[4] Stern, William. *Psychologie der Frühen Kindheit.* Leipzig: Verlag von Quelle, Meyer, 1927. Pp. 342ff. The quotation is taken from the English translation by Anna Barwell (London, George Allen and Unwin).

[5] Beckman, Hermann. "Die Entwicklung der Zahlleistung bei 2-6 jahrigen Kindern." *Zeitschrift für Angewandte Psychologie,* XXII, 1923, pp. 11-18.

[6] Beckman, *op. cit.,* see Table II, p. 29.

[7] Drummond, Margaret. *The Psychology and Teaching of Number,* pp. 31-32.

out counting, by the sounds *ta, ta, e, ta, ta.*[8] These children both imitated something of the rhythmic character of counting and its enumerative aspect as well. Ed. B., aged seventeen months, was accustomed to climb the stairs with his grandmother, while she counted the treads. About this time he was overheard using the number names as he dropped bits of paper into a box. His order was not correct, but he had transferred the use of counting to his play with bits of paper. "Many children do not know the number sequence at five years," Miss Drummond says, and she aptly adds, " . . . these children are possibly already past the best time for learning it."[9]

Number learning is not an easy process. It presents obstacles of which the child himself may be conscious. In his twenty-seventh month, Donald, a brilliant child, "knew the group 'seven,' as every day his mother asked him to bring seven potatoes to her; but not until his thirtieth month could he count them individually. He was anxious to do so and was shown how to, but time after time he would say, 'One, two, three, four, five, six, seven, but point wrongly. . . .

"Circumstances brought Donald's potato game to an untimely end, and unfortunately not much notice was taken of his counting until he was three years and nine months. He was then found to be quite familiar with 'six' and about a month later he announced, 'I know that two fours make eight.' " About this time he was much interested in large numbers, and talked of them readily, although he had no grasp of them. . . . Donald had now evidently passed from the stage of recognition of number groups to that of counting. His history . . . shows plainly that recognition of number groups belongs to a lower level of mental development than does counting."[10]

Little children often act as their own critics. Billy, aged 4 years 10 months, had a milk wagon, in which there were only four milk bottles. One day while playing he assigned characters to the various grown-ups about the house. His aunt had been asked to "play" that she kept a boarding house. When she asked for 15 quarts of milk, he rapidly counted fifteen as he pointed to his four milk bottles. Then he said: "Isn't it queer, I have only four bottles, but I counted to fifteen?" A little girl five and a half tested by Mlle. Descoeudres put down 8 pebbles to match the 6 placed before her. Then as she took one away she said, "No, too many"; and added as she took away a second, "Still too many."

How Number Interpretations Become Meaningful

Number experiences are particular experiences to the child; only through many repetitions do they eventually become general interpretations of experiences. Dorothy, aged 5 years 10 months, was most unaccustomed to number thinking. Her uses of number were specific, particular, not general. Her applications of the one-to-one relation in counting showed this. She had learned a doggerel with which she accompanied ball bouncing. If at the end of the doggerel she had not lost the ball, she went on, counting each bounce. She knew the number series beyond twenty for she frequently was adept enough at her ball-bouncing game to reach these numbers. She was scrupulous in counting one number to a bounce. But if asked to count the stairs on the way to her afternoon rest or on the way to bed at night, the stairway under her counting stretched and shrunk like an accordion. She understood the enumerative aspect of counting only in one instance—her ball game.

This particular, specific application is characteristic of early number learning. By investigation it has been found in the experiential learning of counting and addition, and by analogy we infer that it is present in the

[8] Drummond, *op. cit.*, p. 24.
[9] Drummond, *op. cit.*, p. 26.
[10] Drummond, *op. cit.*, pp. 27-28.

early steps of understanding at least the three other fundamental operations. Research, for example, is needed to determine what are the indications that a child understands the universality of the enumerative character of counting. Among the twenty-three hundred six-year-olds who took a simple number test within their first two weeks in school 60 per cent[11] could count 20 colored beads. The likelihood is that they had mastered this aspect of numbers and would have counted correctly as far as their knowledge of the number series went. Whether or not the ability of the other 40 per cent correlated with their ability at rote counting is not apparent from the available records. This is likely true, however, because Mlle. Descoeudres's six-year-old children counted with enumeration as far as they counted by rote.

Addition combinations learned from everyday experience illustrate again the tendency of passage from specific instances to generalizations. For a time at least every combination has its own independent development. The stages may be differentiated somewhat in this fashion: The first is the realization that two numbers can be combined to give a third, the sum. The two numbers are counted beginning at one in the first addend. In the second stage, the one number is recognized and the second one is counted. In the third stage the one addend is recognized and the second is broken down into parts and added. In the fourth stage the sum is given at once. This stage is often indicated by such remarks as "Everyone knows that 2 + 2 are 4."

Miss Drummond gives illustrations of each of these and an earlier one—one of bewilderment—in her record of Margaret's familiarity with addition when she was five and a half. Miss Drummond designates Margaret as "the uninstructed child." She tested Margaret's knowledge by dealing playing cards two at a time. Quotations from her notes follow:

Cards, 10 and 9. The child kept repeating "Ten and nine," "ten and nine," "ten and nine," for about half a minute. Then she gave up the struggle and counted, thus showing a marked lack of appreciation of the nature of the number ten.

7 and 5. Counted, beginning with one.

8 and 3, "eleven," no counting; 4 and 3, "seven"; 3 and 2, "five." This answer was slow in coming. Perhaps effort had accompanied the two preceding apparently mechanical reactions.

6 and 5, 4 and 5, 7 and 8. Counted.

7 and 4. Now began the thrilling moments. I realized that I was privileged to watch a birth of the spirit. "Seven and four more?" "Seven and two more, nine and two more—*eleven.*"

7 and 6. "Seven and two more, nine; seven and three, one more after nine, ten; and one more after ten, eleven; and one more, twelve; and one more—*thirteen!*"

6 and 4. "Six and one more, seven; and one after seven, eight; and one after eight, nine; and one after nine—*ten!*"

8 and 6. "Eight and six more—eight and one more, nine; eight and two more, one after nine, ten; eight and three more, one after ten, eleven; eight and four more, one after eleven, twelve; eight and five more, one after twelve, thirteen; eight and six more, one after thirteen—*fourteen!*"

10 and 3. "One after ten, eleven; two after ten, twelve; three after ten—*thirteen!*"

The calculations were done in a whisper; as soon as the cards were recognized, the eyes were turned away from them while the calculation was being done. The final results were declared in a loud, triumphant tone. That a child of five and a half should be able to give for approximately ten minutes the intense concentration demanded by the exercise done in this way is interesting—all the more that it is, I believe, typical, not exceptional.[12]

The average six-year-old likely knows some addition combinations (fourth stage), is learning others (third and second stages), and is discovering or making the acquaint-

[11] Buckingham, B. R., and MacLatchy, Josephine H. "The Number Abilities of Children When They Enter Grade One." *Twenty-ninth Yearbook of the National Society for the Study of Education*, 1930. Pp. 473-524.

[12] Drummond, *op. cit.*, pp. 48-49.

ance of others (first stage). He likely would be bewildered, at least surprised, for a moment at the possibility of adding numbers larger than 10 or by the possibility of adding a column of small numbers. Teachers need, because of the specific nature of first steps in number learnings, not to attempt abstract uses of addition combinations until the children have reached the fourth stage.

How many combinations must reach the fourth stage before the type of addition used in adding columns can be attempted—a use of addition in which the addition combinations are used as abstractions—it is not possible here to say. In other words, when is a child's knowledge of addition usable aside from practical instances in which the problem is visible before him? The writer is convinced after analyzing the arithmetic difficulties of older children and even those of university students that there is a direct relation between the time of attempted formal instruction and early, inadequate number understanding.

Number Learning Is Individual

For some persons, at least, school instruction has seemed a Medusa: the individual's understanding of number has become rigid at a very early stage. Recently, the children in a sixth grade whose use of addition was most inadequate were individually tested to determine in detail how they reached the sum of each of the 100 addition combinations. A flash card, bearing a combination, was displayed for two seconds. If the correct sum was not immediately given, the child was allowed the opportunity to compute the sum and asked to tell how he did it. The sums which were not immediately given were computed by roundabout methods involving stages one, two, and three. These types of reckoning which it would have been thrilling to find in six-year-olds were too time-consuming and too distracting to attention to be useful in thinking out the solution of a problem situation; the child lost his way in any elaborate process of thinking dependent upon addition. A university woman aspiring to a Master's degree, whose intelligence percentile rank was 100, was unable to accomplish certain prerequisite statistical courses because they took her too long. It is no wonder for she added $7 + 8$ as $7 + 6 + 2$, and used other methods, as involved and roundabout, in the other fundamental processes. Arithmetic to her was a veritable "bag of tricks."

At the early stages of number learning it is difficult to distinquish between skill and concept. Perhaps that is always true. The primary teacher needs to appreciate the individual character of number learning; the child's thrill in discovery; the effort a child is willing to expend to master number facts; his delight in exactness and correct solutions. The space available is too limited to give illustrations, but experimenters have found that children's early interest in number can have these characteristics. The nursery-school, kindergarten, or primary teacher who seeks to investigate and advance children's early number learning has a thrilling experience promised her by Mlle. Descoeudres who apologized because she was unable to reproduce in her report the charm and interest she found in "investigating the development of the ideas of number among young children."

THE MODERN school is defined in terms of opportunities for individual development, the elimination of fear, the consciousness of the teacher as a helper—not a taskmaster—and a school atmosphere of happy, motivated work characterized by wholesome relationships and attractive surroundings.—*Lester K. Ade*

Readiness for the Thinking Side of Reading

M. Lucile Harrison

If readiness for the thinking side of reading is to be developed the teacher must know what concepts are necessary and how to guide children in developing them. Miss Harrison is associate professor of kindergarten-primary education, Colorado State College of Education, Greeley.

READINESS for reading should be conceived as a very specific state of preparedness for the carrying out of the varied types of activity involved in the whole reading process, and not as a generalized level of maturity sufficient for insuring equal success with all the learnings included in such a complicated skill as reading. Before this idea of reading readiness can be discussed fully it is necessary to establish for the reader the writer's view of the nature of the reading process itself.

Reading has been variously conceived throughout the history of its teaching until finally an all inclusive idea of it may be expressed as "a process of recognizing symbols which serve as stimuli to the recalling and constructing of meaning, accompanied by the manipulating of the resulting meanings in thought processes according to the purposes of the reader." Such a definition, if analyzed, would be found to include: (1) the word recognition process, (2) the recalling and making of meaning as a result of the recognition of familiar symbols upon the page, (3) the manipulation and reorganization of the recalled meanings in the reader's thinking processes, and (4) an application of the products of his thought to his interests and purposes.

Readiness Is of More Than One Kind

Reading readiness should be conceived as readiness for the entire reading act as described above, not in a generalized sense, but rather in a specific sense. In other words, there are specific types of readiness for the word recognition process. There are other specific readinesses which will enable the individual to carry out the thinking side of reading or all that should go on in the mind of the reader beyond mere word recognition.

Readiness for the mechanics of reading is important, for without the proper use of the printed symbols upon the page, the thinking side of reading could not effectively follow. Too often, however, the instructional program for developing reading readiness has been thought complete when readiness for the mechanics of reading alone has been achieved. Because of this fact, the writer wishes to give emphasis to those specific types of readiness which make it possible for the young child to complete the reading act, namely, readiness for the thinking side of reading.

Readiness for the thinking side of reading cannot be complete when the child enters the initial period of reading instruction in the first grade, for, unlike the *mechanics* of reading, the *thinking* side constantly increases in difficulty as the pupil progresses from one grade to another. The farther the pupil goes up the educational ladder, the more frequently does he come in contact with new and strange word meanings or new meanings of familiar words; the organizations of mean-

Editor's Note: This article is taken from *Reading Readiness*, Revised, Part II, by M. Lucile Harrison, Boston: Houghton Mifflin Company, in press. Printed by permission of and through special arrangement with the publishers.

ing, as found in sentence and paragraph structures, grow increasingly difficult; the demands made upon his use of the content of the material become greater; and his own interests and purposes carry him in search of more elusive ideas. Therefore this readiness program cannot be concluded at the beginning of the initial period of reading instruction as has been formerly supposed, but must be carried on with constantly increasing emphasis upon it from grade to grade.

The Instructional Tasks For Developing Readiness

The four instructional tasks for developing readiness for the thinking side of reading remain the same at all levels. They are:

Making provision for the development in pupils of the necessary concepts for constructing meanings which are accurate, complete, and vivid in terms of the specific materials to be read.

Making provision for the development in pupils of a precise usage vocabulary as a carrier of meaning which is adequate for the specific material to be read.

Making provision for the development in pupils of the ability to understand the sentences and paragraphs, or functional organizations of meaning, contained in the specific material to be read.

Making provision for the development in pupils of the ability to select and organize the reading content which is appropriate to the specific purposes of the reader.

These four instructional tasks make up the major portion of the readiness program at any level of instruction. But beyond what is commonly called the preparatory period in the reading program, these four jobs constitute the readiness program in its entirety. This discussion will deal with these specific phases of the readiness program as they should be carried out for the kindergarten and primary grade child.

Providing the Necessary Concepts: Of the four instructional jobs, the first, that of providing the necessary concepts with which to read, is of foremost importance. Without those necessary concepts in the mind of the reader, reading could not possibly take place. It has been the mistaken idea of many teachers, and also readers, that the words which the writer uses upon the page will convey meaning to the mind of the reader if he can but pronounce them. This is far from true. A writer can only stimulate the recall of meanings that the reader already possesses and, through the organization of sentences and paragraphs, aid the reader in the functional reorganization of those meanings. The reader is keenly aware of this when he takes up a difficult treatise on a topic which is entirely outside his own experience. Most of us come upon such reading matter in very highly professionalized writings in the fields of the sciences. The following sentence of familiar and easily pronounceable words conveys no meaning to the ordinary layman because he does not possess in his own mind the necessary meanings to attach to the word symbols as they are used in this specific sentence:

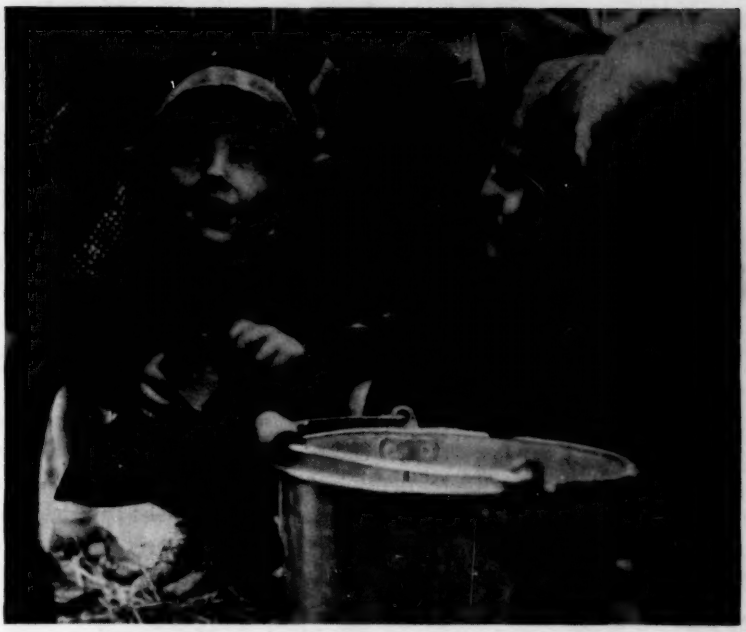
> Since they (protons and deuterons) are merely charged atoms of ordinary and heavy hydrogen, respectively, it is only necessary to accelerate the positive ions of those atoms produced in a discharge tube to give them the required kinetic energies which correspond to accelerating potentials of several million volts.[1]

Each one of these words is familiar and pronounceable by any adult reader, but only the highly trained science expert can construct much meaning from the sentence. Why? Because only the scientist would have the proper meanings stored in his mind which can be recalled easily and organized into usable and correct thought patterns following the recognition of the words in this sentence.

The child in the primary grades is often confronted with as difficult reading matter for him as that sentence is for most adults. Only when a well-organized reading readiness program makes provision for the development in the mind of the child of the

[1] C. W. Watkeys et al. *An Orientation in Science.* New York: McGraw-Hill Book Company, 1938, p. 214.

Opportunities for Gaining New Concepts



So this is where milk comes from!

Photographs, courtesy Earl Bales, Colorado State College of Education, Greeley

These children will always know what a baby lamb looks like.

specific concepts needed for understanding a passage, is its reading possible by that child. Not only must a pupil possess specific concepts in order to read a passage, he must also have them to a certain degree of accuracy, completeness, and vividness necessary to full understanding of the passage to be read. It is the variation in the accuracy, completeness, and vividness of concepts in the minds of children in a classroom which accounts for the variation of meaning which results from the reading of identical material. In the minds of some children that meaning may be inaccurate, and bound to lead them astray in their use of it; in others the meaning may be incomplete, making it only partially useful in a situation in which the reading is to serve a purpose; in still others the meaning may be entirely accurate and complete enough, but somewhat colorless, because it is too little associated with the definite purposes and interests of the reader. It is the teacher's instructional obligation to develop concepts of such quality in the mind of the pupil that the meaning resulting from the stimulating and recalling of those concepts is a useful and vital thought element.

Anatole France gave voice to this very idea when he said:

> What is a book? A series of little printed signs—essentially only that. It is for the reader to supply himself the forms and colors and sentiments to which these signs correspond. It will depend upon him whether the book be dull or brilliant, hot with passion or cold as ice. Or if you prefer to put it otherwise, each word in a book is a magic finger which sets a fibre in our brain vibrating like a harp-string, and so evokes a note from the sounding board of our soul.[2]

Sadly enough, in too many instances, nothing vibrates in the mind of the primary grade child, because he has not stored up the necessary concepts which are those vibrating elements of which Anatole France speaks.

When textbooks for primary grade pupils are analyzed, the number of concepts found in them is unbelievably large, making the reading burden for the pupil much greater than it appears from a vocabulary study of the same books. For example, in a study of twelve primers and first readers, a total of 2400 different word forms were found to carry a total of 4000 different meanings.[3] Some simple words were used in as many as twenty-eight different meaningful settings.

Since the meaning vocabulary necessary for the reading of these books is so great, the teacher's task of being sure that the necessary meaning is in the mind of the primary child before he reads a given passage is a tremendous one, but very vital. A teacher should know her group of pupils so well that she can determine quickly and easily, by the process of inspection, what concepts in a particular selection she will need to develop before those pupils can begin to read. If the teacher does not know her pupils well, there are other means of determining what concepts need to be developed, but those other means are uneconomical and sometimes unreliable.

Developing a Usage Vocabulary: Knowing what concepts need to be developed, the teacher must then go about the task of developing them by the best possible means. Usually, direct, first-hand experiences are most effective; but in other instances, indirect, vicarious experiences are better, depending upon the nature of the concepts to be developed and their remoteness in both time and space. Whatever method is used, no effort should be spared to make students conceptually ready to construct meaning as a result of the reading they do. With lack of readiness in this respect, children either refuse to read, or merely do the pronunciation aspect of the reading act. If they must read and are compelled to bring some results of their reading to a recitation period, they will resort to verbalism; that is, remembering the meaningless words of the book long enough

[2] Anatole France. *The Garden of Epicurus.* New York: Dodd, Meade and Company, 1930, p. 32.

[3] Paul McKee and M. Lucile Harrison. "The Meaning Vocabulary of Primers and First Readers." Unpublished Study, Colorado State College of Education, Greeley, Colorado, 1936.

to recite them to the teacher. No learning results in this case because meaningless words are soon forgotten.

Mere recognition of words on the page for which the reader has no meaning makes reading impossible, but it is quite as hopeless a task when the printed symbols are unfamiliar although their meanings may be in the mind of the reader. A first grade child in the state of Texas may have carried buckets of sand, water, and milk and may have seen buckets used in milking and in gardening. He may, however, fail to attach any meaning to the word "pail" when he sees it on the page because he has only the word "bucket" in his usage vocabulary. In this case, he has the meaning but does not associate it with the word he sees on the printed page.

A third grade pupil may read the direction in a science reader which says, "Cats and birds are different. Tell how they are different." He will usually tell differences in structure very glibly although the word used in the direction was not *structure*. But if he reads the sentence, "Tell the differences in *structure* between cats and birds," his response may be negative. Although the two directions call for the same response, the pupil may be quite unable to make any answer to the second question, because of the unfamiliar word, "structure."

It is a part of the reading readiness instructional program to make the strange word a part of the pupil's usage vocabulary, and to attach it to the already familiar meaning through the process of simple association. If both word and meaning are strange, the task is that of complete concept development, which includes both the development of the meaning and the bringing of the word into the usage vocabulary.

Understanding Sentences and Paragraphs: A primary pupil may know the word forms on the page; he may have meanings in his mind which are instantly recalled as he recognizes word forms, but still he may be unable to read because the organizations of those meanings within the sentences and paragraphs are too complex. Helping the pupil to read in terms of these two large functional organizations of meaning, namely, the sentences and paragraphs in a selection, constitutes the third instructional task in the readiness program for the thinking side of reading.

This third instructional job is a difficult one, because beyond the first reading material which the child uses, the sentence and paragraph organizations increase in complexity very rapidly. The reading matter is soon complicated by (1) the reversal of a simple subject and predicate within a sentence, (2) too numerous adjectives and adverbs modifying subjects and predicates and their modifiers, (3) numerous adjective and adverbial clauses and phrases, (4) many conjunctions and conjunctive adverbs, (5) mystifying pronouns of various types, and (6) complex relationships of numerous sentences within a paragraph.

Some examples of difficult sentences which might easily interfere with a pupil's construction of meaning are taken from a book intended to bridge the gap between first readers and second readers. Note their length and complexity and the unchildlike forms of expression within them:

> If I know J————,
> and I think I do,
> he will be at the gate
> before you have time to think
> where you are going next.
>
> And then—well then,
> you will not know
> where you are going,
> but you will go.
>
> It looked—yes, it looked—
> yes, it was—a donkey!
>
> Mr. B——— followed
> right along behind them,
> and that was a good thing
> because, who knows,
> he might have found
> the basket of apples
> behind the tree.

Such sentences as these will need careful explaining or they will undoubtedly mean very little to the ordinary reader in the grade for which they were intended. If a sentence is so difficult that a child cannot put it together correctly and in the right order when he is given the parts of it in disarranged order, the sentence is usually too difficult for his understanding. Such sentences may have to be shortened, broken up, or simplified as to construction before the young child can construct adequate meaning from the reading of them.

Other difficulties abound in sentences to confuse the immature reader. Some sentences are idiomatic in meaning in their entirety, or understandable only as the reader knows the specific cadence and intonation used in them as they are spoken. Sentences containing such elements of difficulty must be made familiar through oral language activities if they are to become meaningful to the young reader.

Paragraphs are merely longer and more complex organizations of meaning than sentences. They bring even greater difficulties to the young reader than the single sentence within the paragraph. In order to use such large units or organization of meaning, the child must first be able to deal with them in his own thinking and oral language. This is a part of the third instructional job for bringing the primary child to a state of readiness for specific difficulties which will be sure to confront him in the thinking side of reading.

It should be quite evident from the discussion thus far, that much of the instructional program described is truly a language program applied specifically to the problems arising in the thinking side of reading. In fact language and reading differ very little except in the symbols which they employ. They are similar in the thinking mechanisms employed. A well-developed program in the functional aspects of language will greatly benefit the child in establishing readiness for the thinking side of reading.

Using Reading to Satisfy Interests and Purposes: The fourth instructional job in the readiness program for the thinking side of reading makes provision for the development, on the part of the pupil, of the ability to use reading to satisfy his interests and his purposes. The experienced teacher is well aware of the difference in result when a pupil reads with or without purpose or interest. A real and live purpose or interest in the mind of the reader will drive him to use a maximum of effort in his attempt to construct some meaning as he reads a selection. Without either, effort is usually at a low level and the result may be meager meaning. The readiness program for the thinking side of reading includes the development of legitimate interests and drives so that pupils will read with a zest for meaning and realize pleasure in its achievement.

Each one of the four instructional jobs of this readiness program is a very specific task which must be carried out to meet the problems arising in specific selections of reading material for the primary grades. They must be begun in the kindergarten where the pupil should be prepared to cope with the thinking side of reading as he will find it in the preprimers, primers, and first readers. From then on, such a program must be continued so carefully that a pupil will rarely come upon a passage which he cannot read with ease, understanding, and pleasure if he has mastered the mechanics of reading required in the particular selection.

One point remains to be made. The child should be protected against resorting to verbalism whenever complete meaning is not achieved in reading by training him to demand meaning from his teacher whenever he cannot achieve it for himself.

If these instructional tasks for developing in the pupil a specific readiness for the thinking side of reading could be carefully executed at the primary level and continued through the college, our educational systems at all levels would be more effective and their results would be more lasting.

Pupil Growth Through Number Experiences

MARY C. WILSON

MOST teachers in the lower elementary grades agree that number experiences are essential for successful social relationships of their pupils. It is generally conceded that number experiences could not be excluded from the lower grades since they belong as a necessary portion of the child's daily living. Every adult has observed five- and six-year-old children dividing a sack of cookies or a pile of walnuts, or solving some other social problem through the use of numbers. Those who teach in these grades are perplexed to know how to continue in the classroom this natural use of numbers; how to recognize and utilize to advantage opportunities which arise from day to day, and how to plan so there will be on-going experiences with numbers which will assure the well-balanced development of each child.

Miss Wilson describes several kinds of number experiences and tells how they contributed to the development of children's concepts and skills. She is third grade supervisor, Western State Teachers College, Kalamazoo, Michigan.

NUMBER CONTRIBUTES TO SOCIAL UNDERSTANDING

Teaching number work should encompass more than the acquisition of skills and knowledge. It should contribute directly to the development of social understanding. It is fallacious to assume that any subject matter can be mastered through isolated, systematic drill and later transferred effectively in solving social problems. Most worthwhile concepts are established when the problematic situation is made the center from which learnings take place. Learnings effected through insight and understanding of a social situation are more purposeful and more permanent.

Many teachers believe beginning number work should arise out of the child's experiences both in and out of school. It should not consist of formal memorization of combinations and symbols far beyond the understanding and outside the experiences of the child. It is only through numerous experiences that numbers come to have any significance or meaning to an individual. Quite young children are certain that two and two make four because they have used it so many times that it has concrete meaning to them. They are less certain of the sum of eight and seven because their experiences have demanded its use less frequently. In the lower grades there are opportunities for building meanings and understandings of numbers through social situations which are evident during every school day. After such understandings have been formed, a time may be set aside for practice on these number combinations so that the children will be certain of correct solutions.

According to Dr. Buswell, teachers in the lower grades have frequently attempted to shorten the process of gaining concrete meanings of number relationships. They have forced children to memorize meaningless number combinations and have failed to build meaningful concepts through social experience. Such a procedure has resulted in confusion for the children, since understanding is basic to quantitative thinking and computation.[1]

[1] G. T. Buswell, "Deferred Arithmetic." *The Mathematics Teacher*, May, 1938, 31:196.

Understanding does not result from drill, yet a child is conscious of the need of skill in the use of numbers almost as soon as he is conscious of social situations which require the use of numbers for solution. To solve such a situation he soon realizes that he is handicapped and not infrequently embarrassed because he cannot manipulate numbers adequately. It is then that he desires and needs to develop a mastery of number skills. While skill learning can yield no insight into number understandings, it can be used by an individual to meet his social problems more effectively. Drill is used to gain greater efficiency in the computation of numbers which have meaning. Drill can also be used to keep skills at a high level of usefulness so that an individual will not be handicapped in solving satisfactorily the pressing problems which increase in scope and frequency as he lives from day to day.[2]

In some classrooms teachers encourage children to share their social experiences which are directly applicable to growth in building number understandings. Others permit no time to be so spent. This is partially due to the fact that many teachers still conceive arithmetic as essentially a drill subject and require that all distracting comments be barred from the period set aside for drill. Inadvertently they deprive children of the element which builds understandings necessary before drill can be effective.

Use of Numbers Outside School

One morning in a lower grade classroom the children were encouraged to tell how they used numbers when they were not at school. With great joy they cited the following assortment of experiences:

Several rode to and from school on the bus and told of making change with the driver, and of caring for their money. One little girl played school with the neighborhood children and found numbers essential in conducting her play school.

Another child went driving with her parents and brother each Sunday. They played the delightful game of counting animals—a horse counted 5, a cow 3, and a sheep 2, but when a cemetery was seen, 10 must be deducted from the score.

A boy told that he was always the banker when they played "Monopoly." A few children played "Fiddlestix" and could keep their scores accurately.

Some children went to the store for their parents and often had to make change. Most of the children get allowances and several told how they earned and used this money. A boy told of buying a $4.50 football and why he chose it instead of one he might have bought for $2. This purchase necessitated borrowing from his father and he told of his plans for repaying the money. It was one child's responsibility to pay the newspaper boy.

Other experiences were related by the children but a sufficient list has been given to impress one with the wide range of uses children make of numbers outside school.

"Natural" Number Experiences

Natural problems which necessitate an understanding of numbers for solution arise in every schoolroom. These are minimized and entirely thrust aside by some teachers who are eager to get on to the academic program for the day. Others recognize that here is a unique occurrence for this group of children and one which may be used to increase number understandings, either with a few children or the entire group.

During a period of four weeks a teacher kept a diary of classroom experiences which she used definitely as a basis for building number concepts. It was interesting to note that these experiences ranged from those of individuals and small groups to those of the entire class or other grades. It might be a situation new on a particular day, completely solved at the moment, or one which continued for weeks and months.

Space does not permit an enumeration of all the experiences nor would it be of value since every classroom has experiences different from every other one. Briefly, to illus-

[2] J. R. McGaughy, *An Evaluation of the Elementary School.* New York: The Bobbs-Merrill Company, 1937. p. 394.

These girls make their own number experiences by adding the amounts of the postage stamps to compute the cost of mailing their library books.

Photographs by Grace I. Gish, Teacher of Science and Arithmetic, Western State Teachers College

Experiences with numbers—weighing and computing the cost of mailing packages.

their range and multiplicity occurring over a short period of time, a few will be cited:

Three boys assumed responsibility for building a feeding box for winter birds. They measured the size of the pole on which this box could be placed, planned the size of the box, and executed their plans. Some girls made a cover for the cot in the room which also necessitated measuring and planning.

Prices of bulbs at various stores were obtained by one child and the class voted where he should buy them. Children who ate lunches at school were taken to study the menu board of foods and prices in the cafeteria.

A boy learned to tell time because it was necessary for him to go to the school nurse at an appointed time for a period of several days.

Two children took the responsibility of buying a quantity of stamps and selling them to others so that they might mail some invitations to their parents.

The children read over the list of supplies given them at the opening of school and counted the cost of the items they needed. They checked the list with their parents, brought the money to school, and transacted the purchase of supplies without adult help.

All the children were weighed and measured, and enjoyed computing gains and losses as the year proceeded. It was interesting to compare weights and heights of the first month of school with those of the last month of the school year. The class treasurer was busy keeping records of money and giving reports of her records to the class.

Problems of the Consumer

Problems of the consumer very definitely come to children in the lower grades. As these problems arise and at the time they are of direct concern to the individual or group, they should be solved in their proper setting and in relation to one's self and others.[3] Some schools have permitted certain groups to be responsible for releasing school supplies, such as paper and chalk, to the various grades and they have found a reduction in waste. The matter of library fines and effective use of the library is common to every classroom. It has far-reaching implications for building desirable social and economic concepts.

It was necessary for the children in one school to purchase their milk directly from the milkman instead of buying it from a cafeteria. The cafeteria price had been 5¢; the new price was 3¢. One third grade child exclaimed that they would save a lot of money this year. While the children were asked to think how much could be saved each day, one child said he would save 10¢ a week. Another one volunteered that that would be almost enough to buy milk for another week, and explained how he knew. Another pupil explained why it was possible to get the milk cheaper from the milkman and proceeded to give a very adequate explanation of the necessity for profit in cafeterias and stores.

One year the teacher of a third grade class shared with the children the joy and responsibility of selecting and purchasing new books for the room library. Among other experiences which contained great value for the children was the use of number in diverse relations.

First there was the problem of money—how much would be needed and how to get it; how to keep the accounts accurately and how to care for the money adequately. Then the problem of what books to buy necessitated studying catalogues and comparing their price lists with the prices of bookstores within the city.

Handling postage became a very usual experience of the children since they all bought stamps, mailed letters and packages, or received packages. One child saved all the postmarks and postage stamps from the letters and packages received, arranged them on a bulletin board, and figured the total postage. Since many books were sent on approval it was necessary to handle them very carefully and to return promptly those not bought. After packages were wrapped for remailing it was interesting to weigh them

[3] Hollis L. Caswell, "Social Understanding and the School Curriculum," *Teachers College Record*, January 1938, 39:324.

and to compare pupil weights with the weights of the postal clerk. Most children were impressed with the fact that it costs less to mail packages to Chicago than to New York because the distance is less.

Keeping within the budget was another important problem. A few children wished to buy only 50¢ books because they could obtain a greater quantity. Immediately, others in the group were ready to explain the need for some books with lovely illustrations and durable bindings.

Some publishers granted discounts to the school. This necessitated checking invoices carefully with catalogue prices and computing the amount which could be saved.

Since the class did not have sufficient money to keep all the books they had examined and desired to add to the class library, several children decided to purchase books for their personal libraries. This afforded individual experience in ordering and paying for books.

A book party was planned by the children for their parents. Here another type of number experience prevailed. Estimates of the number to attend must be made so that sufficient refreshments could be provided. It was necessary to decide how much the cooky recipe should be increased, to compute the correct increase in ingredients, and to determine what quantities of fruits to purchase for the punch. The children decided where the grocery supplies should be bought so as to realize the most for the money to be expended. They learned why the prices of some foods fluctuated within a few days' time. The purchase of the groceries provided an opportunity to use money in another situation.

Together with the number experiences which evolved from supplying new books for the library came the desire to be more efficient in the use of numbers. Thus opportunity was provided for much practice in gaining skill in computation which already had social and economic meaning for the children. A definite time was set aside for this skill learning. Because the children needed and used in social living the number combinations upon which they were drilling, they gained skill rapidly and took great pride in becoming proficient.

There is a place at every age level for both *social* and *computational* number experiences. When numbers are used in relation to class affairs and in daily living, children formulate accurate and meaningful concepts concerning them. Such meaning may then be utilized in furthering quantitative procedures necessary in pupil growth.[4] Teachers of young children will have solved, in some measure, the perplexing problem of pupil growth in number experiences if they utilize number skills in relation to the social situations of which they are definitely a part.

[4] Leo J. Breuchner, "Deferred Arithmetic," *The Mathematics Teacher*, October, 1938, 31:287. R. L. Morton, "Arithmetic," *The Journal of the National Education Association*, October, 1938, 27:205.

The Glow Worm

I found a worm in my garden, I did;
Had to look pretty sharp cause a stick had him hid.
Funny old worm—wasn't gray, wasn't white;
Little bit like a cabbage worm—only not quite.

Crickets and June bugs, he wasn't like too,
Didn't wear a fur coat like the pillar-cats do;
Legs on him;—six—an' he looked sorta pale—
Couldn't tell where his head stopped to start on his tail.

I took him in to ask Gram what he wuz,
But she just raised her specs and she screeched,
"Dear me, suz! Get that old bug outa' sight quick's you can!"
So I carried him out to the garden again.

Then I spied Jim, he's our gardener man—
He was transplantin' asters from out of a pan.
Jim, he most always is generally right,
An' he said 'twas a glow worm that shines in the night.

—*Helen Frances Temple*

Developing the Language Arts

CLARA BELLE BAKER

Why is it that the natural language expression of young children is so often lost when they enter school? What can be done to preserve and encourage its development? Miss Baker, director of the Children's School, National College of Education, Evanston, Illinois, gives her answers to these questions.

DURING his first five or six years the child makes amazing growth in language. Before he reaches his sixth birthday he may have mastered a vocabulary of two or three thousand words. He is able to use these words with correct inflection in compound and complex as well as in simple sentences. All the language patterns commonly used by adults are at his command. His errors are, as a rule, only those frequently heard in the community in which he lives. His speech is fluent and rhythmical. Frequently it has the charm of originality, uniqueness.

WHY "NATURAL" LANGUAGE LAGS

After entrance to first grade there has often been a slowing up of language development, and sometimes a very rapid backsliding. Before the end of the first year of formal schooling, the rhythmic flow of oral expression has been checked. The child has begun to speak cautiously in formal stilted sentences. Hesitation in speech has increased. Many serious cases of stuttering have had their beginnings in the first grade.

For generations there has been in our primary rooms a tradition of silence. Early stress on written work has rapidly displaced the oral composition of the kindergarten years. In many schools insistence on silent reading has further limited vocalization. Other factors in the elementary grades have contributed to retardation in language development. A heavy reading program for which many children have been unready has led to tension at school and at home. Sometimes first and second grade requirements have included intensive work in writing, spelling, and arithmetic as well as in reading. For the children of the privileged classes private schools have added a foreign language, French or German. The overanxiety of parents, if the child is not immediately successful in mastering these varied symbols, has created further emotional strain, thereby disturbing speech patterns, for speech has been called "the barometer of the emotions." In attempting to adapt reading material to the ability of the least mature children of the group, the teacher has been tempted to simplify it at the expense of style and content. Charts and primers have often lacked the rhythm and charm of the child's own speech. Mechanical methods of teaching reading with their overemphasis on phonetics have no doubt tended to increase hesitation in reading and in speech.

As the child has continued in the elementary school, there has tended to be much stress on correct speech and correct writing, rather than on fluent, expressive, and individual use of language. Children have often been criticized in school for usages commonly accepted in the speech of educated adults and in the books of distinguished modern writers. Because English is a live and not a dead language, it undergoes continual change. In a single decade many words and phrases formerly unknown or disapproved find their way into good usage; and other expressions once approved become obsolete. Recently a jury of linguists classed as cultivated English forty-five expressions common-

ly condemned by grammarians. Current English usage refuses to recognize a distinction between *shall* and *will*, or *may* and *can*. The modern writer feels free to begin a sentence with a conjunction and to end it with a preposition. He uses incomplete sentences when he pleases. Among the former outlaws now admitted to good society are: "It is me," "It is awfully cold," "Who are you looking for?" and "Can I go now?"

Elementary teachers and writers of elementary text-books in their zeal to preserve the rules of traditional grammar have been slow to recognize changing standards. Hence the school child has been rendered self-conscious, timid, and stilted in his expression by an emphasis on errors which according to current usage are no longer errors. He has not been permitted in speaking to use expressions heard frequently on the lips of the educated adults in his community; nor has he been allowed in writing to include certain forms common in recent highly-rated juvenile books.

How "Natural" Language Develops

Many collections of children's spontaneous songs and sayings indicate that boys and girls in a happy environment are capable of delightful utterance, containing the characteristics of the best modern adult composition: naturalness, vividness, forcefulness, individuality. The environment where creative language flourishes is one in which there is a wealth of interesting experiences occurring amid natural social surroundings. In the active life of the modern school there is opportunity for observation and experiment, for investigation and discussion, for planning and performance. Language develops as it contributes to successful living. Vocabulary grows as the children pursue their interests in the fields of science and social studies. Oral expression improves as the young investigators meet in conference to report, discuss, and plan for further activities; as they engage in group games, in constructive projects, and in dramatic play.

The small, informal group is the most effective for growth in oral composition. In a gathering of five or six classmates met to work on a common problem, the children feel free to express individual opinions, and to talk at length in making reports. In a small group it is not difficult to listen courteously without interruption until the opportunity comes for one's own contribution. Some public school teachers with large classes have organized "interest groups." Topics for study have been suggested by the children themselves, and groups have been formed of those with similar interests. In a six weeks summer session one group in a second grade studied dogs, another fish, a third airplanes, and a fourth boats. Each group, with the help of the teacher, made its own collection of pictures, books, and objects. Each group held a conference period daily with the teacher, in order to report, discuss, and plan further activities. It is not uncommon for an entire class to become interested in a single thrilling enterprise such as the preparation of a play, or the publication of a newspaper; but usually the work is carried on most effectively through small committees. Time is provided for each committee to meet with the teacher for oral discussion of the project under way.

Among the most pleasant opportunities for oral composition are the spontaneous groupings that occur in a self-directed period in the schoolroom, at a period assigned to free play on the playground, or at the noon hour when lunch is served at school. Here conversation is spontaneous and informal, and with occasional guidance, may become both stimulating and enjoyable. If the organization of the school does not permit such spontaneous groups, the teacher may still provide occasional periods of informal conversation when children are allowed to tell anecdotes of happenings at home and in

the community. Following each holiday, many amusing and surprising stories are told, if the opportunity is offered.

Making Use of "Natural" Language in Learning Experiences

The teacher of primary reading often jots down the children's spontaneous sayings as they play and work together, and these may be inscribed on charts as early reading lessons. One teacher writes down the comments of the children during their trips, as they watch the animals in the park, or study airplanes at the airport. Another teacher takes notes as the children engage in dramatic play with large houses, stores, and vehicles of their own construction. These conversations afford interesting material for reading lessons. Such compositions usually have more charm and naturalness than the stilted little "stories" sometimes composed by primary classes about their activities; as, "We went to the farm. We saw a cow. We saw a pig. We saw some chickens." Children are always pleased to read records of their own sayings, for the chart recalls to them an interesting or thrilling experience, and their own emotional reaction to it. As they read they relive the happy experience.

Since recent primers and readers contain many delightful stories related to children's activities in the community, the reading of books, therefore, may expand and enrich the children's own experiences. The modern schoolroom has available many books suitable to the abilities and interests of the class, and the teacher is free to use a particular book or story when the children seem ready to enjoy it. The program provides opportunity for reading, in small groups, books chosen to meet the special interests of the group; and also for individual reading of books chosen by the child himself. Books are selected without reference to grade labels. Care is taken that the children do not become discouraged by attempting to read material too difficult in vocabulary, and that the content, however simple, is of vital interest. Oral discussion of pictures and content often helps to clarify meanings and to stimulate desire for further reading. As reading ability grows, much reading of informational books supplements first-hand investigation, and provides facts for oral reports.

Literature, too, has a place in the active school. Several charming picture-story books are found in the library corner of each primary room. The children intrigued by the pictures beg the teacher to read the story aloud. With laughter and tears they follow the adventures of the greedy goat or the little wooden doll, and in animated style discuss the problems of the tale. Soon they will begin reading for fun themselves, and will be able to share jolly stories and rhymes with the class in their own oral reading or story telling.

Young children have many purposes for oral composition and relatively little need for writing. For a time the teacher is the scribe—keeping records of the children's spontaneous songs and stories; sometimes taking dictation as they compose letters to absent friends, stories and poems for the class history, contributions for the school newspaper, songs and tales for use in the celebration of festivals. Not until fluent, oral composition in delightful original style has become a habit does the teacher expect the child to express himself through the medium of pencil and paper. Even after writing and spelling ability are well developed, opportunities for original oral composition are continually welcomed. There is evidence in some modern classrooms that elementary pupils can in time learn to write with the same spontaneity and individuality that they show in conversation.

Letters form the commonest purpose for writing on the part of both adults and children. The most natural and vivid composition of young children is frequently in

the form of letters: friendly letters to absent classmates or teachers, letters of inquiry addressed to those well informed on problems of interest to the group; letters of thanks to those who have helped the children with experiments and excursions; letters of invitation and acceptance. In the little red schoolhouse of yesterday children were punished for writing notes to classmates, but notes continued to be passed. In the modern classroom the children learn to do well what they will do anyway. Sometimes individual mail boxes are provided, and writing and posting notes to one another about class projects or after-school plans becomes customary. Occasionally these notes are read aloud, and suggestions for improvement are given.

While the making of books may have been carried to boredom in some schoolrooms, keen interest and pride is often shown in diaries, autobiographies, and in individual and class records, especially when these are illustrated in original ways. The publication of a class or school newspaper is usually an incentive for good written composition. Inquiring reporters go from room to room gathering news of interesting school and home events. Primary children are usually satisfied with news of school and neighborhood happenings. Boys and girls of the intermediate grades like to include their own comments on important national or world events.

There is considerable evidence that children more readily attain fluency and freedom in written composition when they are permitted to use the simple forms of "manuscript writing," at least in beginning stages, rather than the more complex cursive script. The similarity between printed and manuscript letters makes this form of writing an aid in learning to read and to spell, and its use greatly facilitates ease and accuracy of written expression.

For natural development in the language arts, it is especially important that the spirit of joy and enthusiasm be present in the activities of the school day, and that the children feel the security and confidence which comes from sympathetic appreciation of their efforts. Practice must be provided in handwriting and in spelling, in reading vocabulary and in language usage; but as a rule the necessary drill is set at a separate period. Only such help is given during a creative activity as is requested by the child or needed to enable him to complete his project. Stress on error and correction of error are not allowed to suppress the flow of creative thinking in a group conversation, nor to extinguish the child's first glow of achievement as he completes the writing of an original story or song.

Inventions

If radio's ghostly fingers
Can take music out of the air
And rescue ships from a fate unknown,
And bring air-liners safely home;
If airplanes and streamlined trains
Can cross a continent without rest,
If teletype can prevent a blunder,
What invention will be next, I wonder?

—*Bob*

From *Finding Wisdom* by Gertrude Hartman (John Day)

Across the Editor's Desk

Mr. Pistor's Article THE Editor regrets that lack of space in this issue made it necessary to postpone publishing the second part of Mr. Pistor's article, "Spotlighting Activity Programs," until the February issue. The first part of the manuscript was published in the November issue and described the differences between genuine and non-genuine activity programs. The second part will give suggestions for developing three types of genuine activity programs.

Textbook Clinic UNDER the auspices of the American Institute of Graphic Arts, a Textbook clinic has been formed for the purpose of promoting greater interest in improved textbook design and of providing a common meeting ground for people interested in the writing, publishing, illustrating, designing, manufacturing, and use of textbooks. Real enthusiasm for this project has been shown, for it is felt that, with only occasional exceptions, textbooks have been quite unnecessarily inartistic in makeup.

Any person is eligible for membership in the Clinic who has a definite interest in textbooks. Further information may be obtained from Miss Blanche Decker, executive secretary, The American Institute of Graphic Arts, 115 East 40th Street, New York City.

Children's Interests CHILDREN'S interests are what we make them. All attempts at a scientific study of the so-called natural interest of children fail to reveal any such interest. Reports show that the skews found in the interest curve are due to the fact, that, for example, the bantam hen's egg hatched, that a turtle came into the room, or that the teacher presented something in an extraordinarily intriguing manner.

Why not, then, recognize that interests are made or created by an environment inside of the school as well as out of it; that the responsibility of the school is to capitalize upon interest where it is good and wholesome, to reject and sublimate interest where it is not good and wholesome, substituting therefor the acquisition of worthwhile information and the establishment of proper attitudes. Interest, in other words, grows out of the environment in which the child finds himself. Our responsibility is that of seeing that the child gets the best environment possible.—*Seattle Education Bulletin.*

Kindergarten Newspapers JULIA HAHN, supervising principal of the third division, Washington, D.C., public schools, sent us this account of kindergarten newspapers and two colorful samples which hang in the Editor's office for her enjoyment and that of her frequent visitors.

"Several kindergarten teachers have been experimenting with a kindergarten newspaper which not only contributes to reading readiness but provides a point of contact with the home which is very valuable.

"The teacher acts as stenographer for the children who contribute the news items. She later transfers the items to a large sheet of unprinted newspaper which the children illustrate with crayon pictures. Some of the teachers use carbon paper so that several copies of the items can be made at one time. Others mimeograph the items which the children paste on the large sheets, leaving spaces for illustrations. One teacher prints on a blackboard the news which the children dictate to her. This blackboard newspaper is illustrated with chalk drawings.

"No effort is made to teach the children to read the items, but some of the more mature learn to recognize words incidentally in this way. These newspapers are better suited to the older kindergarten children and provide an interesting activity during the few months before their promotion to first grade.

"Since the newspaper requires considerable work on the part of the teacher, it is usually 'published' only once a week—on Fridays. Sometimes the teacher reserves a section of the paper for a personal message to the parents."

In Favor of the Kindergarten M. E. TOWNSEND, principal of the New Jersey State Normal School, made this statement some time ago concerning kindergartens: "It is my contention that the events of the past few years have indicated clearly that the chief function of education is that of guidance rather than erudition. Slowly the guidance movement in the schools is becoming articulate, and this is largely because of the fact that good kindergarten practice has always conceived of education in that light. Modern civilization requires that some agency of society undertake the deliberate conditioning of boys and girls to undertake successfully life in a highly artificial environment. Guidance, as the kindergarten has thought of it, never means coddling, but rather it signifies the skillful work of the teacher, first to know the child as a person, and then to assist him to develop his optimum personal powers. Probably no other area of education has made so great a contribution in this way as has the kindergarten, and in this it is distinctly a pioneering program."

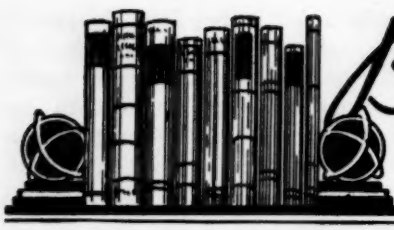
"Living Today—Learning for Tomorrow" AN ATTRACTIVE celluloid hinged booklet, "Living Today—Learning for Tomorrow," is this new course for the social studies from the kindergarten through the senior high school, prepared by the social studies committee of the Seattle, Washington, public schools. It contains one hundred forty-three profusely illustrated pages which tell briefly what the social studies are, give the reasons why they hold an important place in the Seattle schools, and name the understandings which should result from the social studies. In addition, highlights of the work from kindergarten through twelfth grade are traced through their content areas; the approximate time allotments are given; the reasons for the semester's work; the materials of instruction which list books and stories, poems, music, slides, films, pictures, trips, and books for teachers; and the desired outcomes in learnings, abilities, and social growth. It concludes with a list of mimeographed courses and bulletins which have been worked out to help teachers in the development of their social studies work.

Worth McClure, superintendent of Seattle schools, expresses the hope in his introductory letter that the booklet "may serve to interpret well to teachers and parents some of the ways and means by which we are seeking to lead childhood and youth toward competent citizenship. May it serve, above all, to emphasize the ever-to-be-remembered connection between today's school and tomorrow's America."

Convention News

MISS Mamie Hines, local chairman for the A.C.E. convention which is to be held at Atlanta, Georgia, April 10-14, 1939, came to Washington during the Thanksgiving holidays and met with the Executive Board of the Association to complete convention arrangements. She reports great activity on the part of the local group. Mrs. Betty Howard, president of the Georgia Association for Childhood Education and attendance chairman for the convention, has traveled over every section of the state, has helped to organize three new Branches, and is getting people everywhere enthusiastic about the convention.

Plans for contacts to be made with convention visitors before they arrive in Atlanta are in progress; four excursions have been planned; school visiting details are being worked out, and the social committee is completing arrangements for informal good times. The preliminary program developed on the theme of the convention, "Living and Learning in School and Community," will be announced in the February issue.



Book... REVIEWS

Editor, ALICE TEMPLE

PRACTICE IN PRESCHOOL EDUCATION. *By Ruth Updegraff, Helen C. Dawe, Evaline E. Fales, Bernice Stormes, and Mary G. Oliver. New York: McGraw-Hill Book Company, 1938. Pp. xvi + 407. $3.00.*

Some seventeen years ago the preschool laboratories of the Iowa Child Welfare Research Station were established in order "to bring together a group of children readily available for study under relatively controlled conditions." These laboratories, enlarged and extended, are still maintained primarily for this purpose and continue to make valuable contributions to the scientific study of child development. *Practice in Preschool Education* is a detailed account, written by the supervisor and head teachers of the preschool laboratories, of the *educational* program as it functions with the two-, three-, four- and five-year-old groups. The purpose is "not only to describe nursery school practice but to relate it to a background of theory concerning the objectives of preschool education." (p. 4)

The book opens with a "minute-to-minute" description of one day's activities in each group. The general impression thus gained is greatly amplified and clarified in the following chapters. Here all phases of the program are dealt with under such headings as physical care and guidance, intellectual development, language and speech, personality development and social behavior, and aesthetic development. Through a wealth of descriptive material accompanied by comment and explanation the reader gets a clear picture of the aims and procedures which prevail in each group.

It is refreshing to note that the authors do not hesitate to discuss and evaluate experiences and activities, even at the nursery school level, in terms of school subjects—nature study, social studies, music, art, and literature. In the junior-primary group, which is housed in the elementary school building, the children "participate in four definite and carefully planned social units necessary to community living. Because of its many possibilities in developing reading readiness, one of these, the post office unit, is used every year. In fact the whole program of the junior-primary group identifies it completely with the modern elementary school, and rightly so.

The appendix, some one hundred pages, contains complete lists of equipment, books, phonograph records, and samples of record blanks used by the school, together with a bibliography on nature study and suggested references on preschool education.

Naturally, as in any book of this type, certain of the materials and practices described will be questioned. On the whole, however, this clear, straightforward presentation of the philosophy and procedures of one school is a very real contribution to the field and will be read with interest and profit by all teachers of young children.—*A. T.*

LET'S GO TO SCHOOL. *By Albion H. Horrall, Lydia E. Condone, Mabel S. Willson and Leah Smith Rhodes. New York: McGraw-Hill Company, 1938. Pp. x + 434. $3.00.*

Written by educators who have acquired sufficient first-hand knowledge to substantiate their theories, *Let's Go to School* is an account of a sane and practical application of progressive educational methods to a typical school situation. The book is a refutation of several popular beliefs, chief among them being the conviction that an activities program can be carried on successfully only in small select groups and in schools that are generously financed; that an activity program neglects the fundamental skills and drills; and that the average teacher is too limited in imagination or skill to direct children's interests into creative channels.

With clarity and sincerity the authors present

in Part I the facts essential to an understanding of the organization, the philosophy, and the curriculum of the Lincoln Elementary School in San Jose, California. Using a wealth of illustrative material, they explain the steps taken in launching an activity program, the changes necessitated by the new plan, and the integrative factors developed for the purpose of encouraging pupil-sharing of experiences and responsibility. An honest self appraisal, which is both subjective and objective in nature, follows.

Part II contains a detailed description of three units: a study of animals, a study of the community of San Jose, and of European architecture. Stenographic reports of class discussions, excellent photographs, and samples of children's original poems, reports and dramatizations illustrate the development of each unit. Such varied problems as methods of planning excursions; building up vocabularies; relating reading, English, music and art to the unit subject; learning to use references; constructing to scale, and setting up behavior patterns are covered with thoroughness. The actual accomplishments of the Lincoln School children as listed under the headings: *Producers' Enterprises, Consumers' Enterprises, Problem Solving Enterprises* and *Specific Learning Enterprises* should convince the most dogmatic critic that an activity program does not neglect the fundamental skills.

Attractive in make-up, rich in content, this book should appeal to both primary and elementary teachers.—*Katharine I. Koch, Mishawaka Public Schools.*

FIRST THINGS FIRST. *A Practical Plan of Character Education for School and Home. By Agness Boysen. Chicago: Associated Authors, 1938. Pp. 185. $2.00.*

This is an account of a developing experiment conducted over a period of ten years by the author in an elementary school at Minneapolis, Minnesota, of which she is the principal. Mrs. Boysen discusses briefly the grounds for widespread dissatisfaction with the product of our schools in the matter of character training; deplores the amount of mere theorizing on the subject and the lack of definite, consistent procedures in school and home to rectify these defects; and describes the plan for character development in her own school.

The general principles offered are such as most students of the subject would accept. One notes also the earnest conviction, evident sincerity, and sound common sense of the leader which brought about excellent cooperation from teachers, children, parents, and other members of the community. Possibly this sympathetic understanding of a common objective is the most important factor in whatever good results were obtained.

The novel feature of this plan, however, is the elaboration of a system of "grading," with a report and manual covering numerous traits and attitudes. This report takes the place of the typical one on academic subjects. It lists ten "character qualities": reliability, obedience, judgment, punctuality, initiative, personal habits, industry, social attitudes, self-control, and thrift. The children's manual, *A Key To Success,* lists about fifty "demands to be considered." Under the leading categories each child is expected to examine his own behavior daily and to check on his report card any "violation." A clean card at the end of six weeks means no "violation."

It is this central feature of the plan which many readers will call into serious question. It bristles with difficulties which the book does not adequately meet: to mention only one—the tendency of children to pass judgment on the ethical standards of others, especially parents, in complex situations which defy any easy verdict. One wishes also for a fuller account of the dynamic life of the school in which these desirable traits might constantly function and in which the undesirable ones could be discouraged effectively.—*Annie E. Moore, formerly associate professor of education, Teachers College, Columbia University.*

FIST PUPPETRY. *By David Frederick Milligan. New York: A. S. Barnes and Company, 1938. Pp. ix + 130. $1.50.*

The author regards puppetry as the logical introduction to the drama for children and says that fist puppets are the simplest, the most economical, and the most effective of all types. He tells how to make fist puppets, what they cost, how to construct a theatre, how to select and adapt plays, produce shows and take care of all necessary details. The book is well illustrated with plates and drawings.—*A. T.*

BOOKS FOR CHILDREN

***Editor,* MAY HILL ARBUTHNOT**

PENN. *By Elizabeth Janet Gray. Illustrated by George Whitney. New York: Viking Press, 1938. Pp. 298. $2.50.*

A book by Elizabeth Janet Gray is a guarantee of distinction. Delightful as are her stories, *Jane Hope* and *Beppy Marlowe,* ever since she gave us *Young Walter Scott* we have been hoping for another biography, and here it is.

Penn's story is a thrilling one. Miss Gray manages to give us the stormy background of English life in the seventeenth century; its religious conflicts and political upheavals with Admiral Penn and his Quaker son, William, in the forefront of it all. These noble souls, loving and warring with each other, are excellent examples of the conflicting elements in British life at that time. Both father and son emerge as great figures but William Penn commands the reader's admiration and affection with his fight for justice in the courts, freedom in religion, and honesty and love in his daily dealings with men. He is a hero as handsome and lovable as he is far-sighted and courageous.

This book, beautifully written, with a background of scholarly research, is for young people, but every teacher who studies William Penn should read it and share it with her group.

YINKA-TU THE YAK. *By Alice Alison Lide. Illustrated by Kurt Wiese. New York: The Viking Press, 1938. Pp. 63. $2.00.*

Here is a story of Tibet as vivid and real as any news of our native land. Both the author and illustrator know this wild country and Miss Lide's fascinating tale is made still more absorbing by Kurt Wiese's powerful pictures.

Young Sifan is given a baby yak which becomes a lively and lovable pet. Together they explore ancient caves, fall down a dangerous hole, and find a strange treasure. Finally, when the yak grows up, they have their great adventure. They rescue a lama, a priest, and are sent by him with a secret message to a great monastery. The message is in the old language of knotted-string, only the string used is the silky under-hair of Yinka-Tu. The boy and the yak get the message safely through the mountains and are well rewarded. A gripping story that will be a favorite with children seven to ten years old.

LAZY LIZA LIZARD. *By Marie Curtis Raines. Illustrated by Vera Neville. Philadelphia: John C. Winston Company, 1938. Pp. 183. $2.00.*

Miss Raines has a real gift for story-telling and it is easy to see how her kindergarten children enjoyed this series of stories about the villainous Liza Lizard, good Mr. Frog, Mr. Snake, and all their neighbors.

Lazy Liza Lizard is very bad indeed. She steals, she deceives, she leads good mice astray, but always she is out-witted by those two philosophers, Mr. Frog and Mr. Snake. The end of the series finds Liza repentant, reformed and rechristened "Lovely Liza Lizard."

Except for Liza's surprising reformation and the pious character given to Mr. Snake, these stories are in the folk-tale style. They are well told; the incidents are fresh and amusing. Miss Neville makes the villainous Liza a ridiculous but appealing creature. For children five to eight.

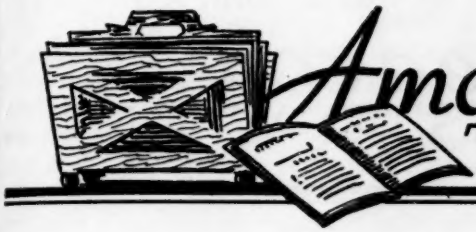
ARAMINTA'S GOAT. *By Eva Knox Evans. Drawings by Erick Berry. New York: G. P. Putnam's Sons, 1938. Pp. 92. $2.00.*

Mrs. Evans manages to tell her delightful stories about Araminta, not in Negro dialect but with a kind of cadence frequently found in children's speech. The style is direct and simple, and it reads beautifully.

Araminta again plays with Jerome Anthony but Goat has now grown up. Sometimes Goat is a docile playmate; sometimes he takes matters in his own stride and furnishes Araminta and Jerome with some awful moments. Perhaps their worst experience is where they add antlers to his horns and take him to the Christmas party as Santa's reindeer. The havoc he causes makes riotous reading, but finally, he is shoved outside and the party gets underway again.

Children six to eight will chuckle over the new Araminta stories. Hallowe'en, Thanksgiving, and Christmas are amusingly celebrated.

Editor, **RUTH BRISTOL**



Among... THE MAGAZINES

FIFTY YEARS OF CHILD STUDY. *Child Study,* November, 1938, 16:34-80.

Childhood Education salutes the Child Study Association of America on the completion of fifty years of extraordinarily effective work for the good of the boys and girls of America and their parents. The November issue of *Child Study* is this anniversary number and contains excellent historical material for those interested in the progress of child development. The contributors include Arnold Gesell, Adolf Meyer, Bernard Glueck, and Sidonie Gruenberg.

One of the most striking and informative parts of the magazine is a double page of black and white sketches which show vividly the changes between parental guidance in 1888 and that of today.

SPEECH DEFECTS. By Anne H. McAllister. *The New Era in Home and School,* September-October, 1938, 19:234-238.

We are most grateful for guidance in the speech growth of children. This is one area which has been neglected and in which we need help badly. The author's suggestion that the causes of any individual's speech defects be investigated carefully is quite in harmony with our philosophy of child guidance. The child must feel himself to be sympathetically understood if he is to be kept from speech disabilities, or helped to overcome speech disabilities which he may have acquired. The author includes case studies which are helpful.

PUPIL INTERESTS AND NEEDS AS A BASIS FOR CURRICULUM DEVELOPMENT. By O. I. Frederick. *Curriculum Journal,* November, 1938, 9:321-322.

The idea that the interests and needs of boys and girls should be the starting point in making curricula seems to be spreading rapidly in educational circles. There are signs of it in national programs and, increasingly, in magazine articles.

Dr. Frederick's article is cogent and suggestive. We have supposed that all teachers of young children had long ago accepted the idea that education is most effective when it does not go outside of the immediate sensory experiences of the boys and girls for its materials. But we still find primary grades in which the Pilgrims occupy the center of thought and action in celebrations of Thanksgiving, instead of the more simple and important idea that it is a universal thank-you day.

There is need, too, for more contact between teachers of children of different ages so that more suitable curriculum choices can be made. Dr. Frederick states, "It appears desirable for pupils in early elementary grades to become better acquainted with the physical and social environment fairly close at hand."

THE RELATIONSHIP BETWEEN EDUCATION AND MENTAL HYGIENE. By E. V. Pullias. *Mental Hygiene,* October, 1938, 22:612-624.

Have nursery school, kindergarten, and primary teachers an important role to play in the promotion of mental health? If so, we must incorporate into our teaching the wisdom of such articles as this one by Dr. Pullias. Here are a few quotations:

Mental health is a condition of the personality which results in a type of functioning that brings *constructive* happiness to the individual.

The purpose of the program is to produce personalities that, when mature, are capable of self-direction and self-repair under all reasonable conditions.

Desirable and constructive personality is built or produced, and does not simply grow.

Research.. ABSTRACTS

Editor, JOHN A. HOCKETT

MANUSCRIPT WRITING AND SPELLING ACHIEVEMENT. *By Jonathan W. Varty. New York: Teachers College, Columbia University, Contributions to Education, No. 749, 1938. Pp. 63.*

An experimental study was carried on in six New York City schools to compare the relative effect on spelling of cursive and manuscript writing. Usable data were secured on 448 second- and third-grade pupils in three schools teaching manuscript writing and on 663 pupils in the same grades in three schools teaching cursive writing.

All the pupils were given the Kuhlmann-Anderson Intelligence Test, a reading test, and three specially constructed spelling tests. The Gates Primary Reading Test was used for the second grade and the Gates Silent Reading Test for the third grade. Since four different spelling books were used in the various schools, three spelling tests were prepared as follows: (1) All words which were officially taught in the same half-grade in all six schools and not officially taught in any previous grade constituted the "taught word series." (2) The non-taught word series consisted of words appearing in the Buckingham and the Ashbaugh Spelling Scales which were not officially taught in any of the six schools. (3) The equated word series comprised words officially taught in the previous grade in all of the schools, and selected words, some of which were taught in the experimental schools and some in the control schools. These tests were given during the second week and again during the next to the last week of the same semester.

Using the equivalent-groups method of equating, the results show that the differences between the experimental and control groups were not large enough to be statistically significant. Results in the 2A grade favored the group using cursive writing while, in the 2B and 3A grades, results favored the manuscript group. The person-to-person matching technique was also used, with results approximately the same as in the group comparisons. The general conclusion, then, for the children and methods used in this experiment is that manuscript writing is of no more value than cursive writing in promoting gain in spelling. The author suggests that, if manuscript writing does promote better spelling, it is probably in the area of incidental learning.

A COOPERATIVE STUDY OF READING READINESS. *Compiled under the direction of Ethel Mabie Falk. Madison, Wisconsin: Public Schools, 1937. Mimeographed. Pp. 106.*

A practical study of various aspects of the problem of reading readiness was carried on by the teachers, principals, and supervisors of the Madison, Wisconsin, schools. As a result of a reading test given to the second and third grades, 160 children and 147 children who scored, respectively, in the upper quarter and the lower quarter of the group were designated as good readers and poor readers. Various data were assembled for these children and comparisons made with respect to their CA, MA, and IQ upon entrance to kindergarten and grade one. Of the good readers, 11 per cent entered grade one with MA less than 6:0 and 30 per cent with MA less than 6:6. Ninety-one per cent, however, had CA less than 6:6. Of the poor readers, 44 per cent were below MA of 6:0 and 75 per cent were below MA of 6:6. Eighty per cent were below CA of 6:6. The committee also grouped children by MA, upon entrance to grade one in one-half-year intervals, of 5:5 and younger to 8:0 and older. The percentage of good readers in each of these groups is as follows: 12, 28, 60, 73, 66, 80, 95.

Among the conclusions drawn from this type

of evidence are the following: Since nearly all pupils below IQ 90, regardless of CA, are found among the poor readers, it does not appear that greater chronological maturity compensates for low IQ, nor does it appear that merely postponing instruction for older children of low IQ will bring desired results in reading. There is evidence that if the bright young child is allowed to mature, he can reasonably be expected to be a good reader by the end of grade two or grade three.

In a study of the relation of social and emotional adjustment to successful reading, it was found that 74 per cent of the good readers were rated satisfactory and only 5 per cent unsatisfactory, while 7 per cent of the poor readers were rated satisfactory and 51 per cent unsatisfactory. The others were rated average. Other conclusions of the committee are: The timid, fearful child presents a real problem. The best adjustment in attitude toward authority occurs at the normal age level for both kindergarten and first grade children. There was no evidence that greater chronological maturity alone brings improved social and emotional adjustment.

A survey was made of the home environments of children who entered grade one obviously ready for reading and of those quite certainly unready. The committee finds "a tremendous relation between a happy home environment, rich, cultural experiences, and readiness for reading. The children who had few experiences and over-attention or neglect at home had difficulty in learning to read." In view of the fact that many of the homes possessed little or no reading material and offered meager opportunities for development along other lines, the committee recommends "a still fuller program of varied and enriching experiences for the first grade groups. Some of these experiences may seem quite commonplace to the child of the average and the above-average home, but the school will be failing if it does not do its best to compensate through its daily program for the losses of worth-while things which these other children cannot have in their own homes."

The physical factors in reading readiness were also studied, as a result of which the committee recommended a complete physical examination for every child upon his entrance to school and a yearly examination thereafter, with permanent cumulative records. They also suggested a campaign of education among parents to insure correction of defects and urged the prompt correction of defects by public agencies when the parents are unable to bear the expense.

Other committees which studied the school environment, language development, and desirable programs for the development of reading readiness suggest a rich and varied program of experiences for the primary curriculum.

PHONIC READINESS. By E. W. Dolch and Maurine Bloomster. *The Elementary School Journal,* November 1937, 38:201-205.

The authors begin with the assumption that phonic instruction should be given somewhat later than the beginning of reading. Their purpose is to discover the relationship between mental age and success in phonic attack on words. The experiment was carried on in the first two grades of a school in which phonics was given some but not unusual emphasis and in which teaching had been uniform for at least two years. Mental ages were determined from the average of results on the Pintner-Cunningham Primary Mental Test and the Detroit First-Grade Intelligence Test. Phonics achievement was measured by Tests 1 and 2 of the Dolch-Gray Basic Reading Tests, Word-Attack Series. These tests require discrimination between words that are so similar in appearance that most children are compelled to sound out the forms in order to make the correct response. Only Test 1 was used in the first grade. The average score on the two phonic tests was used with the second-grade pupils.

Correlations ranging from .41 to .52 are reported between mental age and phonic achievement for two first-grade and for two second-grade groups. A more detailed study of the data shows that children with high mental age sometimes fail to acquire phonic ability but that those of low mental age are certain to fail. The authors report also that children with mental ages below seven years made only chance scores. Their conclusion is that mental age of seven years seems to be the minimum at which a child can be expected to use phonics even in simple situations. They question whether many schools are not expecting results from phonic instruction much too early.

MARY E. LEEPER

News . . . HERE AND THERE

New A.C.E. Branches

Orange County Association for Childhood Education, Westminster, California
Davenport Association for Childhood Education, Iowa
Manchester Association for Childhood Education, Iowa
Lansing Association for Childhood Education, Michigan
Association for Childhood Education of Parker School District, Greenville, South Carolina
Clark County Association for Childhood Education, South Dakota
Chester County Association for Childhood Education, Tennessee
Freed-Hardeman Association for Childhood Education, Henderson, Tennessee
Roane County Association for Childhood Education, Tennessee
Denton County Association for Childhood Education, Texas

Publication of A.C.E. Branch

Under the direction of Angela Wiechard, five St. Paul, Minnesota, teachers compiled a collection of sixteen original songs for young children, with illustrations by Ann Barnes, under the title "Songlets." The book is dedicated to the memory of Mary B. Seymour, first president of the St. Paul Association for Childhood Education. Proceeds from sales will be used to further the work for children of the St. Paul Branch. Copies, in mimeograph form, may be secured from Mrs. Gladys L. Jeska, 52 W. Magnolia Street, St. Paul, Minnesota.

Toy Forum

Directed by Frances M. Berry, chairman of the Committee on Equipment and Supplies of the Association for Childhood Education, a toy forum was held by four sponsoring and twelve affiliated organizations in a Baltimore department store during the second week of October. The tangible results are interesting: Several groups have asked for programs on children's toys; salespeople have been helped to understand the suitable types of toys; new types of toys have been added to the department store stock; sales of recommended toys have increased. Short talks by specialists in many fields, followed by general discussion, were daily features of the week's program. If you would like a copy of this program, send a postcard to A.C.E. Headquarters, 1201 Sixteenth Street, N.W., Washington, D.C.

Executive Board Meets

On the two days following Thanksgiving the five members of the Executive Board of the Association for Childhood Education gathered in Washington for their midwinter meeting. The time was spent in hearing, discussing and acting upon reports of the Business Adviser, the Editor, the Executive Secretary, and chairmen of national committees; planning with Mamie Heinz, general chairman of Atlanta convention committees, the details of the convention; and caring for matters involving policies and practices of the Association.

New College

Those familiar with the purposes and program of New College, Teachers College, Columbia University, have read with amazement and deep concern the statement made by Dean Russell on November 10, that the college would not exist after June 1939. A portion of his statement follows:

"For many years Teachers College, through its department of Normal School Education, has been developing ideas for the better education of teachers. Seven years ago, owing to the lack of facilities for experimentation and demonstration in the field, New College for the Education of Teachers was established under the leadership of Professor Thomas Alexander. This experiment has had the widest influence.

The aim has been to demonstrate the proper scope of teacher education and the practicability of new methods. This year there is a fine enrollment and commendable progress is being made in all its departments. Professionalized subject matter, the seminar approach, field work experience, community organization, foreign study, interneship, educational guidance, new type records and reports—all these are securing wide recognition and incorporation in other institutions for the education of teachers. No experiment has been more valuable for Teachers College.

"Nevertheless, we are confronted with problems which appear unsurmountable. The deficit of New College last year was $57,000. We are convinced that only a subsidy of $35,000 a year can provide the kind of program we want, not including any charges for heat, light, supplies and maintenance. In the light of these circumstances, we cannot continue New College as a separate enterprise."

All those who believe that on the adequate preparation of teachers depends the satisfactory solving of major problems in education, join the faculty, students and friends of New College in hoping that a way will be found to continue this valuable experiment in teacher preparation.

National Council of Parent Education

The National Council of Parent Education will hold its sixth biennial conference in Detroit, February 21-23, 1939. Such topics as "What Lies Ahead for the American Family and What Are the Implications for Education," "What Is the Responsibility of Government for Policies That Affect Family Life," and "New Sources of Knowledge and Points of View Regarding Family Life," are scheduled for discussion at general sessions. Special group sessions will consider methods in family life education at various levels and through various agencies and the contributions of various arts, sciences and professions to family life education. The conference will be open to both members and non-members. On February 23 a joint conference will be held with the Progressive Education Association. Dr. Robert G. Foster, of the Merrill-Palmer School, is in charge of the program and local arrangements for the conference.

Outline of Study

"Know Your Child" is the title of a study outline prepared by Mary Dabney Davis, Specialist in Nursery-Kindergarten-Primary Education, Office of Education, U. S. Department of the Interior, Washington, D.C. A copy of the outline may be secured without charge by addressing Dr. Davis at the Office of Education.

A New Book

Those familiar with the story of kindergartens in this country know of Amalie Hofer Jerome and will welcome news of her new book, "My Century," a biography of her father. In this story of a foreign-born citizen who fought with sword and pen for the American principles of freedom and opportunity for all, there is much of historical and universal significance. Andreas Franz Hofer, in his eighty-four years of life, was editor, writer, musician and traveler. His experiences are brought to us in a delightful way through Mrs. Jerome's book, published by Bruce Humphries, Inc., New York City. Price $2.75.

Growing Interest in Young Children

Montana: The public school system of Bozeman is now selecting equipment for four new kindergartens to be opened soon.

New York: The Council of School Superintendents in New York State, at its fifty-sixth annual meeting, adopted the following resolution: "Because of the importance of the kindergarten program it is urged that this unit shall be granted financial support comparable to that provided for the elementary grades, and that the legislative committee be instructed to use every effort to cause legislation to be enacted during the 1939 session of the New York State Legislature to provide such financial support."

Pennsylvania: A committee has been appointed by the Pennsylvania State Education Association to study the problems of the extension of kindergarten education in the Commonwealth. A part of its work will be to determine needed changes in legislation, concerning the preparation of kindergarten teachers, and the steps that are necessary to make school districts feel the need of this important work.

Washington: Seattle announces that as the

result of a policy adopted by the school board four years ago, the number of pupils per teacher this year is the lowest in the history of Seattle schools. The salaries of Seattle teachers were restored to full schedule in 1937.

In Other Countries

India: From the Department of Public Instruction at Bangalore, India, comes this announcement: In 1938-39 the course sanctioned by the Government for nursery school teachers will come into effect in such of the training institutions as have the necessary facilities. Examinations following the course will consist of two parts, theory (aims and methods of nursery education, psychology of early childhood based on direct study of children of nursery school age; hygiene—personal, school and social; educational handwork) and practice (tests of the candidate's ability to prepare simple educative material and appliances and to handle a group of children in a nursery school).

Scotland: The first Child Guidance Clinic in Great Britain was opened in Scotland at the University of Glasgow in 1925. Other clinics followed at Greenock, Paisley and Clydebank. In recent years three clinics have been opened in Edinburgh, one in Dundee, and one in Aberdeen.

The work of these clinics is coordinated by the Scottish Child Guidance Council, which studies the technical problems submitted by them. Council members have compiled a comprehensive and critical list of the tests now in use and a list of "approved schools" and institutions, containing all the information necessary to make a judicious decision regarding a child in need of institutional treatment.

The aim of the clinics is to provide appropriate treatment for children who—for reasons which the staff endeavors to discover—cannot adjust themselves to one or another of the social groups to which they belong. All types of cases are referred to them: children with speech defects or disabilities; problem or delinquent children; children with nervous troubles or psychopathic cases; children with temperamental maladjustments; children with learning disabilities.

The clinics keep in close contact with their young patients' homes and teachers and maintain friendly relations with juvenile courts, town councils, provincial committees, local branches of the British Medical Association, and the Educational Institute of Scotland.

Believing that many of the easier cases might be looked after in the schools by properly prepared teachers, the Glasgow University Educational Clinic began in 1935-36 a two-year course in child guidance. Seventy-two teachers, chosen from a larger number of applicants, completed the course.

Scotland believes in its Child Guidance Clinics, which have proved their efficiency and their value.

South Africa: South Africa's first art center for children was opened in Pretoria during the year. This achievement was made possible by the cooperation of the Transvaal Educational Department, which gave the space; the New Education Fellowship and other interested people who helped to raise funds; and the Carnegie Corporation, which provided the director's salary. No child from three to fourteen years of age who wishes to attend the center is refused. The only charge is a shilling registration fee each term.

The Pretoria Parents' Association is active in maintaining the three nursery schools in Pretoria and in addition to regular meetings has study circles on adolescent psychology and the pre-school child.

Switzerland: The Canton of Geneva has established a Children's Office "whose aim is to ensure the welfare and the physical and mental health of children and young people and, in a general way, to foster their development." In this office, under the Department of Public Instruction, are grouped the school medical service, school clinical service, school social service, vocational guidance and apprenticeship service, service for the protection of minors, and general wardship service.

Another law has established a Children's Foundation, "whose aim is the placing in appropriate institutions of such children as cannot be brought up in their families, in particular for educational reasons (behavior troubles, poor home circumstances, unworthy or maladjusted parents)."

Broadcasting

A radio program which consistently provides stimulating and thought-provoking material is the University of Chicago Round Table. No script is used in these informal discussions of contemporary problems. Subjects for discussion are seldom chosen more than a week in advance of the broadcast and a significant happening at home or abroad may be the signal for a last minute change in the topic. To widen interest in these discussions of current events and problems, the University of Chicago has prepared posters and weekly announcements regarding the program. This material will be sent without charge to teachers and librarians who request it.

"Wings for the Martins" is the title of a series of broadcasts heard each Wednesday night from 9:30 to 10:00 P.M., EST, over the NBC Blue Network. The programs, which deal in drama form with the everyday issues of education, are a cooperative presentation of the U. S. Office of Education and the National Congress of Parents and Teachers.

WPA Nursery Schools in Georgia

Visitors to the A.C.E. annual conference in Atlanta will be interested in hearing about the WPA nursery schools. There are thirty-four nursery schools in the state; three in Atlanta.

NYA residential projects in Georgia are located where there are nursery schools. The students who live at these centers observe and at times assist as helpers in the nursery schools and are also given training in this work. Among the institutions interested and cooperating in this training are the Georgia State College for Women at Milledgeville and the Fort Valley Normal and Industrial College (Negro).

Recently the president of the Central City College for Negroes in Macon requested the WPA Education Division to assist in training six of the seniors specializing in teaching young children. As an expression of his appreciation for this training the president contributes $13.50 monthly for food for the nursery schools. The local communities provide fifty per cent of the food costs for the thirty-four schools.

Grace Everett Barnard

Miss Barnard, who died June 24, 1938, at Oakland, is described as "the greatest pioneer worker in the interest of kindergartens in the history of education in California" in one of the numerous letters and testimonials compiled by the California A.C.E., Bay Section. Quotations from three testimonials are included here:

From Margaret Myers, a friend of many years: "Miss Barnard began her training as a kindergarten teacher under Kate Douglas Wiggin, taught for a time in Woodland, and returned to Oakland where she taught in the free kindergarten until she organized her own kindergarten and later The Oakland Kindergarten Training School. Miss Barnard was many years ahead of her time in teaching methods. She was fearless in her discipline with methods peculiarly her own for bringing out the best in her pupils."

Carol Martel, a kindergarten teacher in Berkeley, quotes from a letter from Marjorie Ziegenfuss, a former student of Miss Barnard's: "Miss Barnard's professional spirit was one to be greatly admired. She refused to become the director of the San Francisco State Training School because she did not want to admit anyone whom she did not feel was a really truly kindergartner at heart. That is why she had a private institution always. If certain students could not afford to pay tuition and she felt they were the real types for kindergarten teachers, she taught them gratis and they paid her when they began to teach. If at the end of the training period she felt that someone was not worthy to teach, she gave back the money, but would not give a diploma.

From Rose Sheehan, a close friend: "Grace Barnard . . . regarded education as her duty to civilization and became a teacher, not because it was helpful to her, but because it was the widest road upon which to lead the greatest number to a higher and better life. The educational world has lost one of its most secure assets in her passing to the greater life."